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**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Medicare & Medicaid Services**

**42 CFR Parts 412, 413, 424, and 495**

**[CMS-1694-F]**

**RIN 0938-AT27**

**Medicare Program; Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Policy Changes and Fiscal Year 2019 Rates; Quality Reporting Requirements for Specific Providers; Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs (Promoting Interoperability Programs) Requirements for Eligible Hospitals, Critical Access Hospitals, and Eligible Professionals; Medicare Cost Reporting Requirements; and Physician Certification and Recertification of Claims**

**AGENCY:** Centers for Medicare & Medicaid Services (CMS), HHS.

**ACTION:** Final rule.

**SUMMARY:** We are revising the Medicare hospital inpatient prospective payment systems (IPPS) for operating and capital-related costs of acute care hospitals to implement changes arising from our continuing experience with these systems for FY 2019. Some of these changes implement certain statutory provisions contained in the 21<sup>st</sup> Century Cures Act and the Bipartisan Budget Act of 2018, and other legislation. We also are making changes relating to Medicare graduate medical education (GME) affiliation agreements for new urban teaching hospitals. In addition, we are providing the

market basket update that will apply to the rate-of-increase limits for certain hospitals excluded from the IPPS that are paid on a reasonable cost basis, subject to these limits for FY 2019. We are updating the payment policies and the annual payment rates for the Medicare prospective payment system (PPS) for inpatient hospital services provided by long-term care hospitals (LTCHs) for FY 2019.

In addition, we are establishing new requirements or revising existing requirements for quality reporting by specific Medicare providers (acute care hospitals, PPS-exempt cancer hospitals, and LTCHs). We also are establishing new requirements or revising existing requirements for eligible professionals (EPs), eligible hospitals, and critical access hospitals (CAHs) participating in the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs (now referred to as the Promoting Interoperability Programs). In addition, we are finalizing modifications to the requirements that apply to States operating Medicaid Promoting Interoperability Programs. We are updating policies for the Hospital Value-Based Purchasing (VBP) Program, the Hospital Readmissions Reduction Program, and the Hospital-Acquired Condition (HAC) Reduction Program.

We also are making changes relating to the required supporting documentation for an acceptable Medicare cost report submission and the supporting information for physician certification and recertification of claims.

**DATES:** This final rule is effective on October 1, 2018.

**FOR FURTHER INFORMATION CONTACT:**

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## **SUPPLEMENTARY INFORMATION:**

### **Electronic Access**

This **Federal Register** document is available from the **Federal Register** online database through Federal Digital System (FDsys), a service of the U.S. Government Printing Office. This database can be accessed via the Internet at:

<http://www.gpo.gov/fdsys>.

### **Tables Available through the Internet on the CMS Website**

In the past, a majority of the tables referred to throughout this preamble and in the Addendum to the proposed rule and the final rule were published in the **Federal Register** as part of the annual proposed and final rules. However, beginning in FY 2012, the majority of the IPPS tables and LTCH PPS tables are no longer published in the **Federal Register**. Instead, these tables, generally, will be available only through the Internet. The IPPS tables for this final rule are available through the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. Click on the link on the left side of the screen titled, “FY 2019 IPPS Final Rule Home Page” or “Acute Inpatient—Files for Download.” The LTCH PPS tables for this FY 2019 final rule are available through the Internet on the CMS website at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/LongTermCareHospitalPPS/index.html> under the list item for Regulation Number CMS-1694-F. For further details on the contents of the tables referenced in this final rule, we refer readers to section VI. of the Addendum to this final rule.

Readers who experience any problems accessing any of the tables that are posted on the CMS websites identified above should contact Michael Treitel at (410) 786-4552.

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**I. Executive Summary and Background**

**A. Executive Summary**

1. Purpose and Legal Authority

This final rule makes payment and policy changes under the Medicare inpatient prospective payment systems (IPPS) for operating and capital-related costs of acute care hospitals as well as for certain hospitals and hospital units excluded from the IPPS. In addition, it makes payment and policy changes for inpatient hospital services provided by long-term care hospitals (LTCHs) under the long-term care hospital prospective payment system (LTCH PPS). This final rule also makes policy changes to programs associated with Medicare IPPS hospitals, IPPS-excluded hospitals, and LTCHs.

We are establishing new requirements and revising existing requirements for quality reporting by specific providers (acute care hospitals, PPS-exempt cancer hospitals, and LTCHs) that are participating in Medicare. We also are establishing new requirements and revising existing requirements for eligible professionals (EPs), eligible hospitals, and CAHs participating in the Medicare and Medicaid Promoting Interoperability Programs. We are updating policies for the Hospital Value-Based Purchasing (VBP) Program, the Hospital Readmissions Reduction Program, and the Hospital-Acquired Condition (HAC) Reduction Program.

We are making changes relating to the supporting documentation required for an acceptable Medicare cost report submission and the supporting information for physician certification and recertification of claims.

Under various statutory authorities, we are making changes to the Medicare IPPS, to the LTCH PPS, and to other related payment methodologies and programs for FY 2019 and subsequent fiscal years. These statutory authorities include, but are not limited to, the following:

- Section 1886(d) of the Social Security Act (the Act), which sets forth a system of payment for the operating costs of acute care hospital inpatient stays under Medicare Part A (Hospital Insurance) based on prospectively set rates. Section 1886(g) of the Act requires that, instead of paying for capital-related costs of inpatient hospital services on a reasonable cost basis, the Secretary use a prospective payment system (PPS).

- Section 1886(d)(1)(B) of the Act, which specifies that certain hospitals and hospital units are excluded from the IPPS. These hospitals and units are: rehabilitation hospitals and units; LTCHs; psychiatric hospitals and units; children's hospitals; cancer hospitals; extended neoplastic disease care hospitals, and hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa). Religious nonmedical health care institutions (RNHCIs) are also excluded from the IPPS.

- Sections 123(a) and (c) of the BBRA (Pub. L. 106-113) and section 307(b)(1) of the BIPA (Pub. L. 106-554) (as codified under section 1886(m)(1) of the Act), which provide for the development and implementation of a prospective payment system for payment for inpatient hospital services of LTCHs described in section 1886(d)(1)(B)(iv) of the Act.

- Sections 1814(l), 1820, and 1834(g) of the Act, which specify that payments are made to critical access hospitals (CAHs) (that is, rural hospitals or facilities that meet certain statutory requirements) for inpatient and outpatient services and that these payments are generally based on 101 percent of reasonable cost.

- Section 1866(k) of the Act, as added by section 3005 of the Affordable Care Act, which establishes a quality reporting program for hospitals described in section 1886(d)(1)(B)(v) of the Act, referred to as “PPS-exempt cancer hospitals.”
- Section 1886(a)(4) of the Act, which specifies that costs of approved educational activities are excluded from the operating costs of inpatient hospital services. Hospitals with approved graduate medical education (GME) programs are paid for the direct costs of GME in accordance with section 1886(h) of the Act.
- Section 1886(b)(3)(B)(viii) of the Act, which requires the Secretary to reduce the applicable percentage increase that would otherwise apply to the standardized amount applicable to a subsection (d) hospital for discharges occurring in a fiscal year if the hospital does not submit data on measures in a form and manner, and at a time, specified by the Secretary.
- Section 1886(o) of the Act, which requires the Secretary to establish a Hospital Value-Based Purchasing (VBP) Program, under which value-based incentive payments are made in a fiscal year to hospitals meeting performance standards established for a performance period for such fiscal year.
- Section 1886(p) of the Act, as added by section 3008 of the Affordable Care Act, which establishes a Hospital-Acquired Condition (HAC) Reduction Program, under which payments to applicable hospitals are adjusted to provide an incentive to reduce hospital-acquired conditions.
- Section 1886(q) of the Act, as added by section 3025 of the Affordable Care Act and amended by section 10309 of the Affordable Care Act and section 15002 of the

21<sup>st</sup> Century Cures Act, which establishes the “Hospital Readmissions Reduction Program.” Under the program, payments for discharges from an “applicable hospital” under section 1886(d) of the Act will be reduced to account for certain excess readmissions. Section 15002 of the 21<sup>st</sup> Century Cures Act requires the Secretary to compare cohorts of hospitals to each other in determining the extent of excess readmissions.

- Section 1886(r) of the Act, as added by section 3133 of the Affordable Care Act, which provides for a reduction to disproportionate share hospital (DSH) payments under section 1886(d)(5)(F) of the Act and for a new uncompensated care payment to eligible hospitals. Specifically, section 1886(r) of the Act requires that, for fiscal year 2014 and each subsequent fiscal year, subsection (d) hospitals that would otherwise receive a DSH payment made under section 1886(d)(5)(F) of the Act will receive two separate payments: (1) 25 percent of the amount they previously would have received under section 1886(d)(5)(F) of the Act for DSH (“the empirically justified amount”), and (2) an additional payment for the DSH hospital’s proportion of uncompensated care, determined as the product of three factors. These three factors are: (1) 75 percent of the payments that would otherwise be made under section 1886(d)(5)(F) of the Act; (2) 1 minus the percent change in the percent of individuals who are uninsured (minus 0.2 percentage point for FY 2018 and FY 2019); and (3) a hospital’s uncompensated care amount relative to the uncompensated care amount of all DSH hospitals expressed as a percentage.

- Section 1886(m)(6) of the Act, as added by section 1206(a)(1) of the Pathway for Sustainable Growth Rate (SGR) Reform Act of 2013 (Pub. L. 113-67) and amended by section 51005(a) of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), which provided for the establishment of site neutral payment rate criteria under the LTCH PPS, with implementation beginning in FY 2016, and provides for a 4-year transitional blended payment rate for discharges occurring in LTCH cost reporting periods beginning in FYs 2016 through 2019. Section 51005(b) of the Bipartisan Budget Act of 2018 amended section 1886(m)(6)(B) by adding new clause (iv), which specifies that the IPPS comparable amount defined in clause (ii)(I) shall be reduced by 4.6 percent for FYs 2018 through 2026.

- Section 1886(m)(6) of the Act, as amended by section 15009 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), which provides for a temporary exception to the application of the site neutral payment rate under the LTCH PPS for certain spinal cord specialty hospitals for discharges in cost reporting periods beginning during FYs 2018 and 2019.

- Section 1886(m)(6) of the Act, as amended by section 15010 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), which provides for a temporary exception to the application of the site neutral payment rate under the LTCH PPS for certain LTCHs with certain discharges with severe wounds occurring in cost reporting periods beginning during FY 2018.

- Section 1886(m)(5)(D)(iv) of the Act, as added by section 1206(c) of the Pathway for Sustainable Growth Rate (SGR) Reform Act of 2013 (Pub. L. 113-67),

which provides for the establishment of a functional status quality measure in the LTCH QRP for change in mobility among inpatients requiring ventilator support.

- Section 1899B of the Act, as added by section 2(a) of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act, Pub. L. 113-185), which provides for the establishment of standardized data reporting for certain post-acute care providers, including LTCHs.

## 2. Improving Patient Outcomes and Reducing Burden Through Meaningful Measures

Regulatory reform and reducing regulatory burden are high priorities for CMS. To reduce the regulatory burden on the healthcare industry, lower health care costs, and enhance patient care, in October 2017, we launched the Meaningful Measures Initiative.<sup>1</sup> This initiative is one component of our agency-wide Patients Over Paperwork Initiative,<sup>2</sup> which is aimed at evaluating and streamlining regulations with a goal to reduce unnecessary cost and burden, increase efficiencies, and improve beneficiary experience. The Meaningful Measures Initiative is aimed at identifying the highest priority areas for quality measurement and quality improvement, in order to assess the core quality of care issues that are most vital to advancing our work to improve patient outcomes. The Meaningful Measures Initiative represents a new approach to quality measures that will foster operational efficiencies and will reduce costs, including collection and reporting

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<sup>1</sup> Meaningful Measures webpage: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/MMF/General-info-Sub-Page.html>.

<sup>2</sup> Remarks by Administrator Seema Verma at the Health Care Payment Learning and Action Network (LAN) Fall Summit, as prepared for delivery on October 30, 2017. Available at: <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2017-Fact-Sheet-items/2017-10-30.html>.

burden while producing quality measurement that is more focused on meaningful outcomes.

The Meaningful Measures framework has the following objectives:

- Address high-impact measure areas that safeguard public health;
- Patient-centered and meaningful to patients;
- Outcome-based where possible;
- Fulfill each program’s statutory requirements;
- Minimize the level of burden for health care providers (for example, through a preference for EHR-based measures, where possible, such as electronic clinical quality measures<sup>3</sup>;
- Significant opportunity for improvement;
- Address measure needs for population based payment through alternative payment models; and
- Align across programs and/or with other payers.

In order to achieve these objectives, we have identified 19 Meaningful Measures areas and mapped them to six overarching quality priorities, as shown in the following table:

<b>Quality Priority</b>	<b>Meaningful Measure Area</b>
<b>Making Care Safer by Reducing Harm Caused in the Delivery of Care</b>	<b>Healthcare-Associated Infections</b>
	<b>Preventable Healthcare Harm</b>
<b>Strengthen Person and Family Engagement as Partners in Their Care</b>	<b>Care is Personalized and Aligned with Patient’s Goals</b>
	<b>End of Life Care According to</b>

<sup>3</sup> We refer readers to section VIII.A.9.c.of the preamble of this final rule where we discuss public comments on the potential future development and adoption of eCQMs.

<b>Quality Priority</b>	<b>Meaningful Measure Area</b>
	<b>Preferences</b>
	<b>Patient’s Experience of Care</b>
	<b>Patient Reported Functional Outcomes</b>
<b>Promote Effective Communication and Coordination of Care</b>	<b>Medication Management</b>
	<b>Admissions and Readmissions to Hospitals</b>
	<b>Transfer of Health Information and Interoperability</b>
<b>Promote Effective Prevention and Treatment of Chronic Disease</b>	<b>Preventive Care</b>
	<b>Management of Chronic Conditions</b>
	<b>Prevention, Treatment, and Management of Mental Health</b>
	<b>Prevention and Treatment of Opioid and Substance Use Disorders</b>
	<b>Risk Adjusted Mortality</b>
<b>Work with Communities to Promote Best Practices of Healthy Living</b>	<b>Equity of Care</b>
	<b>Community Engagement</b>
<b>Make Care Affordable</b>	<b>Appropriate Use of Healthcare</b>
	<b>Patient-focused Episode of Care</b>
	<b>Risk Adjusted Total Cost of Care</b>

By including Meaningful Measures in our programs, we believe that we can also address the following cross-cutting measure criteria:

- Eliminating disparities;
- Tracking measurable outcomes and impact;
- Safeguarding public health;
- Achieving cost savings;
- Improving access for rural communities; and
- Reducing burden.

We believe that the Meaningful Measures Initiative will improve outcomes for patients, their families, and health care providers, while reducing burden and costs for clinicians and providers, as well as promoting operational efficiencies.

We received numerous comments from stakeholders regarding the Meaningful Measures Initiative and the impact of its implementation in CMS' quality programs. Many of these comments pertained to specific program proposals, and are discussed in the appropriate program-specific sections of this final rule. However, commenters also provided insights and recommendations for the ongoing development of the Meaningful Measures Initiative generally, including: ensuring transparency in public reporting and usability of publicly reported data; evaluating the benefit of individual measures to patients via use in quality programs weighed against the burden to providers of collecting and reporting that measure data; and identifying additional opportunities for alignment across CMS quality programs. We look forward to continuing to work with stakeholders to refine and further implement the Meaningful Measures Initiative, and will take commenters' insights and recommendations into account moving forward.

### 3. Summary of the Major Provisions

Below we provide a summary of the major provisions in this final rule. In general, these major provisions are as part of the annual update to the payment policies and payment rates, consistent with the applicable statutory provisions. A general summary of the proposed changes that we included in the proposed rule issued prior to this final rule is presented in section I.D. of the preamble of this final rule.

#### a. MS-DRG Documentation and Coding Adjustment

Section 631 of the American Taxpayer Relief Act of 2012 (ATRA, Pub. L. 112-240) amended section 7(b)(1)(B) of Pub. L. 110-90 to require the Secretary to make a recoupment adjustment to the standardized amount of Medicare payments to acute care hospitals to account for changes in MS-DRG documentation and coding that do not reflect real changes in case-mix, totaling \$11 billion over a 4-year period of FYs 2014, 2015, 2016, and 2017. The FY 2014 through FY 2017 adjustments represented the amount of the increase in aggregate payments as a result of not completing the prospective adjustment authorized under section 7(b)(1)(A) of Pub. L. 110-90 until FY 2013. Prior to the ATRA, this amount could not have been recovered under Pub. L. 110 90. Section 414 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) (Pub. L. 114-10) replaced the single positive adjustment we intended to make in FY 2018 with a 0.5 percent positive adjustment to the standardized amount of Medicare payments to acute care hospitals for FYs 2018 through 2023. (The FY 2018 adjustment was subsequently adjusted to 0.4588 percent by section 15005 of the

21st Century Cures Act.) Therefore, for FY 2019, we are making an adjustment of +0.5 percent to the standardized amount.

b. Expansion of the Postacute Care Transfer Policy

Section 53109 of the Bipartisan Budget Act of 2018 amended section 1886(d)(5)(J)(ii) of the Act to also include discharges to hospice care by a hospice program as a qualified discharge, effective for discharges occurring on or after October 1, 2018. Accordingly, we are making conforming amendments to § 412.4(c) of the regulation, effective for discharges on or after October 1, 2018, to specify that if a discharge is assigned to one of the MS-DRGs subject to the postacute care transfer policy and the individual is transferred to hospice care by a hospice program, the discharge is subject to payment as a transfer case.

c. DSH Payment Adjustment and Additional Payment for Uncompensated Care

Section 3133 of the Affordable Care Act modified the Medicare disproportionate share hospital (DSH) payment methodology beginning in FY 2014. Under section 1886(r) of the Act, which was added by section 3133 of the Affordable Care Act, starting in FY 2014, DSHs receive 25 percent of the amount they previously would have received under the statutory formula for Medicare DSH payments in section 1886(d)(5)(F) of the Act. The remaining amount, equal to 75 percent of the amount that otherwise would have been paid as Medicare DSH payments, is paid as additional payments after the amount is reduced for changes in the percentage of individuals that are uninsured. Each Medicare DSH will receive an additional payment based on its share of the total amount of uncompensated care for all Medicare DSHs for a given time period.

In this FY 2019 IPPS/LTCH PPS final rule, we are updating our estimates of the three factors used to determine uncompensated care payments for FY 2019. We are continuing to use uninsured estimates produced by CMS' Office of the Actuary (OACT) as part of the development of the National Health Expenditure Accounts (NHEA) in the calculation of Factor 2. We also are continuing to incorporate data from Worksheet S-10 in the calculation of hospitals' share of the aggregate amount of uncompensated care by combining data on uncompensated care costs from Worksheet S-10 for FYs 2014 and 2015 with proxy data regarding a hospital's share of low-income insured days for FY 2013 to determine Factor 3 for FY 2019. In addition, we are using only data regarding low-income insured days for FY 2013 to determine the amount of uncompensated care payments for Puerto Rico hospitals, Indian Health Service and Tribal hospitals, and all-inclusive rate providers. For this final rule, we are establishing the following policies: (1) for providers with multiple cost reports, beginning in the same fiscal year, to use the longest cost report and annualize Medicaid data and uncompensated care data if a hospital's cost report does not equal 12 months of data; (2) in the rare case where a provider has multiple cost reports, beginning in the same fiscal year, but one report also spans the entirety of the following fiscal year, such that the hospital has no cost report for that fiscal year, the cost report that spans both fiscal years will be used for the latter fiscal year; and (3) to apply statistical trim methodologies to potentially aberrant cost-to-charge ratios (CCRs) and potentially aberrant uncompensated care costs reported on the Worksheet S-10.

d. Changes to the LTCH PPS

In this final rule, we set forth changes to the LTCH PPS Federal payment rates, factors, and other payment rate policies under the LTCH PPS for FY 2019. In addition, we are eliminating the 25-percent threshold policy, and under this policy, we are applying a one-time adjustment of approximately 0.9 percent to the LTCH PPS standard Federal payment rate in FY 2019 to ensure this elimination of the 25-percent threshold policy is budget neutral.

e. Reduction of Hospital Payments for Excess Readmissions

We are making changes to policies for the Hospital Readmissions Reduction Program, which was established under section 1886(q) of the Act, as added by section 3025 of the Affordable Care Act, as amended by section 10309 of the Affordable Care Act and further amended by section 15002 of the 21st Century Cures Act. The Hospital Readmissions Reduction Program requires a reduction to a hospital's base operating DRG payment to account for excess readmissions of selected applicable conditions. For FY 2018 and subsequent years, the reduction is based on a hospital's risk-adjusted readmission rate during a 3-year period for acute myocardial infarction (AMI), heart failure (HF), pneumonia, chronic obstructive pulmonary disease (COPD), total hip arthroplasty/total knee arthroplasty (THA/TKA), and coronary artery bypass graft (CABG). In this final rule, we are establishing the applicable periods for FY 2019, FY 2020, and FY 2021. We also are codifying the definitions of dual-eligible patients, the proportion of dual-eligibles, and the applicable period for dual-eligibility.

f. Hospital Value-Based Purchasing (VBP) Program

Section 1886(o) of the Act requires the Secretary to establish a Hospital VBP Program under which value-based incentive payments are made in a fiscal year to hospitals based on their performance on measures established for a performance period for such fiscal year. As part of agency-wide efforts under the Meaningful Measures Initiative to use a parsimonious set of the most meaningful measures for patients, clinicians, and providers in our quality programs and the Patients Over Paperwork Initiative to reduce costs and burden and program complexity, as discussed in section I.A.2. of the preamble of this final rule, we are removing a total of 4 measures from the Hospital VBP Program, all of which will continue to be used in the Hospital IQR Program, in order to reduce the costs and complexity of tracking these measures in multiple programs. Specifically, we are removing one measure, beginning with the FY 2021 program year: (1) Elective Delivery (NQF #0469) (PC-01). We also are removing three measures from the Hospital VBP Program, effective with the effective date of this FY 2019 IPPS/LTCH PPS final rule: (1) Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Acute Myocardial Infarction (NQF #2431) (AMI Payment); (2) Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Heart Failure (NQF #2436) (HF Payment); and (3) Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Pneumonia (PN Payment) (NQF #2579). In addition, we are renaming the Clinical Care domain as the Clinical Outcomes domain, beginning with the

FY 2020 program year. We also are adopting measure removal factors for the Hospital VBP Program.

We are not finalizing our proposals to remove of the following six patient safety measures: (1) National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138); (2) National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139); (3) American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure (NQF #0753); (4) National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* Bacteremia (MRSA) Outcome Measure (NQF #1716); (5) National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717); and (6) Patient Safety and Adverse Events (Composite) (NQF #0531) (PSI 90). We are not finalizing our proposal to remove the Safety domain from the Hospital VBP Program, as we are not finalizing our proposals to remove all of the measures in this domain, and therefore we also are not finalizing changes to the domain weighting.

g. Hospital-Acquired Condition (HAC) Reduction Program

Section 1886(p) of the Act, as added under section 3008(a) of the Affordable Care Act, establishes an incentive to hospitals to reduce the incidence of hospital-acquired conditions by requiring the Secretary to make an adjustment to payments to applicable hospitals effective for discharges beginning on October 1, 2014. This 1-percent payment

reduction applies to a hospital whose ranking in the worst-performing quartile (25 percent) of all applicable hospitals, relative to the national average, of conditions acquired during the applicable period and on all of the hospital's discharges for the specified fiscal year. As part of our agency-wide Patients over Paperwork and Meaningful Measures Initiatives, discussed in section I.A.2. of the preamble of this final rule, we are retaining the measures currently included in the HAC Reduction Program because the measures address a performance gap in patient safety and reduce harm caused in the delivery of care. In this final rule, we are: (1) establishing administrative policies to collect, validate, and publicly report NHSN healthcare-associated infection (HAI) quality measure data that facilitate a seamless transition, independent of the Hospital IQR Program, beginning with January 1, 2020 infectious events; (2) changing the scoring methodology by removing domains and assigning equal weighting to each measure for which a hospital has a measure; and (3) establishing the applicable period for FY 2021. In addition, we are summarizing comments we received regarding the potential future inclusion of additional measures, including eCQMs.

#### h. Hospital Inpatient Quality Reporting (IQR) Program

Under section 1886(b)(3)(B)(viii) of the Act, subsection (d) hospitals are required to report data on measures selected by the Secretary for a fiscal year in order to receive the full annual percentage increase that would otherwise apply to the standardized amount applicable to discharges occurring in that fiscal year.

In this final rule, we are making several changes. As part of agency-wide efforts under the Meaningful Measures Initiative to use a parsimonious set of the most

meaningful measures for patients and clinicians in our quality programs and the Patients Over Paperwork initiative to reduce burden, cost, and program complexity, as discussed in section I.A.2. of the preamble of this final rule, we are adding a new measure removal factor and removing a total of 39 measures from the Hospital IQR Program. We are finalizing a modified version of our proposal to remove 5 of those measures such that removal is delayed by 1 year. For a full list of measures being removed, we refer readers to section VIII.A.5.c. of the preamble of this final rule. Beginning with the CY 2018 reporting period/FY 2020 payment determination and subsequent years, we are removing 17 claims-based measures and two structural measures. Beginning with the CY 2019 reporting period/FY 2021 payment determination and subsequent years, we are removing three chart-abstracted measures and two claims-based measures. Beginning with the CY 2020 reporting period/FY 2022 payment determination and subsequent years, we are removing six chart-abstracted measures, one claims-based measure, and seven eCQMs from the Hospital IQR Program measure set. Beginning with the CY 2021 reporting period/FY 2023 payment determination, we are removing one claims-based measure.

In addition, for the CY 2019 reporting period/FY 2021 payment determination, we are: (1) requiring the same eCQM reporting requirements that were adopted for the CY 2018 reporting period/FY 2020 payment determination (82 FR 38355 through 38361), such that hospitals submit one, self-selected calendar quarter of 2019 data for 4 eCQMs in the Hospital IQR Program measure set; and (2) requiring that hospitals use the 2015 Edition certification criteria for CEHRT. These changes are in alignment with changes or current established policies under the Medicare and Medicaid Promoting

Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs). In addition, we are summarizing public comments we received on two measures we are considering for potential future inclusion in the Hospital IQR Program, as well as on the potential future development and adoption of electronic clinical quality measures generally.

i. Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

The LTCH QRP is authorized by section 1886(m)(5) of the Act and applies to all hospitals certified by Medicare as long-term care hospitals (LTCHs). Under the LTCH QRP, the Secretary reduces by 2 percentage points the annual update to the LTCH PPS standard Federal rate for discharges for an LTCH during a fiscal year if the LTCH fails to submit data in accordance with the LTCH QRP requirements specified for that fiscal year. As part of agency-wide efforts under the Meaningful Measures Initiative to use a parsimonious set of the most meaningful measures for patients and clinicians in our quality programs and the Patients Over Paperwork Initiative to reduce cost and burden and program complexity, as discussed in section I.A.2. of the preamble of this final rule, we are removing three measures from the LTCH QRP. We also are adopting a new measure removal factor and are codifying the measure removal factors in our regulations. In addition, we are updating our regulations to expand the methods by which an LTCH is notified of noncompliance with the requirements of the LTCH QRP for a program year and how CMS will notify an LTCH of a reconsideration decision.

j. Medicare and Medicaid Promoting Interoperability Programs (previously referred to as Medicare and Medicaid EHR Incentive Programs)

In this final rule, we are finalizing several changes to reduce burden, increase interoperability and improve patient electronic access to their health information under the Medicare and Medicaid Promoting Interoperability Programs (previously referred to as Medicare and Medicaid EHR Incentive Programs). Specifically, we are finalizing: (1) an EHR reporting period of a minimum of any continuous 90 days in CYs 2019 and 2020 for new and returning participants attesting to CMS or their State Medicaid agency; (2) modifications to our proposed performance-based scoring methodology, which consists of a smaller set of objectives as well as a smaller set of new and modified measures; (3) the removal of certain CQMs beginning with the reporting period in CY 2020 as well as the CY 2019 reporting requirements we proposed to align the CQM reporting requirements for the Promoting Interoperability Programs with the Hospital IQR Program; (4) the codification of policies for subsection (d) Puerto Rico hospitals; (5) amendments to the prior approval policy applicable in the Medicaid Promoting Interoperability Program to align with the prior approval policy for MMIS and ADP systems and to minimize burden on States; and (6) deadlines for funding availability for States to conclude the Medicaid Promoting Interoperability Program.

4. Summary of Costs and Benefits

- *Adjustment for MS-DRG Documentation and Coding Changes.* Section 414 of the MACRA replaced the single positive adjustment we intended to make in FY 2018 once the recoupment required by section 631 of the ATRA was complete

with a 0.5 percent positive adjustment to the standardized amount of Medicare payments to acute care hospitals for FYs 2018 through 2023. (The FY 2018 adjustment was subsequently adjusted to 0.4588 percent by section 15005 of the 21st Century Cures Act.) For FY 2019, we are making an adjustment of +0.5 percent to the standardized amount consistent with the MACRA.

- *Expansion of the Postacute Care Transfer Policy.* Section 53109 of the Bipartisan Budget Act of 2018 amended section 1886(d)(5)(J)(ii) of the Act to also include discharges to hospice care by a hospice program as a qualified discharge, effective for discharges occurring on or after October 1, 2018. Accordingly, we are making conforming amendments to § 412.4(c) of the regulation to specify that, effective for discharges on or after October 1, 2018, if a discharge is assigned to one of the MS-DRGs subject to the postacute care transfer policy, and the individual is transferred to hospice care by a hospice program, the discharge will be subject to payment as a transfer case. We estimate that this statutory expansion to the postacute care transfer policy will reduce Medicare payments under the IPPS by approximately \$240 million in FY 2019.

- *Medicare DSH Payment Adjustment and Additional Payment for Uncompensated Care.* Under section 1886(r) of the Act (as added by section 3133 of the Affordable Care Act), DSH payments to hospitals under section 1886(d)(5)(F) of the Act are reduced and an additional payment for uncompensated care is made to eligible hospitals, beginning in FY 2014. Hospitals that receive Medicare DSH payments receive 25 percent of the amount they previously would have received under

the statutory formula for Medicare DSH payments in section 1886(d)(5)(F) of the Act. The remainder, equal to an estimate of 75 percent of what otherwise would have been paid as Medicare DSH payments, is the basis for determining the additional payments for uncompensated care after the amount is reduced for changes in the percentage of individuals that are uninsured and additional statutory adjustments. Each hospital that receives Medicare DSH payments will receive an additional payment for uncompensated care based on its share of the total uncompensated care amount reported by Medicare DSHs. The reduction to Medicare DSH payments is not budget neutral.

For FY 2019, we are updating our estimates of the three factors used to determine uncompensated care payments. We are continuing to use uninsured estimates produced by OACT as part of the development of the NHEA in the calculation of Factor 2. We also are continuing to incorporate data from Worksheet S-10 in the calculation of hospitals' share of the aggregate amount of uncompensated care by combining data on uncompensated care costs from Worksheet S-10 for FY 2014 and FY 2015 with proxy data regarding a hospital's share of low-income insured days for FY 2013 to determine Factor 3 for FY 2019. To determine the amount of uncompensated care for Puerto Rico hospitals, Indian Health Service and Tribal hospitals, and all-inclusive rate providers, we are using only the data regarding low-income insured days for FY 2013. In addition, in this final rule, we are establishing the following policies: (1) for providers with multiple cost reports beginning in the same fiscal year, to use the longest cost report and annualize Medicaid

data and uncompensated care data if a hospital's cost report does not equal 12 months of data; (2) in the rare case where a provider has multiple cost reports beginning in the same fiscal year, but one report also spans the entirety of the following fiscal year such that the hospital has no cost report for that fiscal year, the cost report that spans both fiscal years will be used for the latter fiscal year; and (3) to apply statistical trim methodologies to potentially aberrant CCRs and potentially aberrant uncompensated care costs.

We project that the amount available to distribute as payments for uncompensated care for FY 2019 will increase by approximately \$1.5 billion, as compared to the estimate of overall payments, including Medicare DSH payments and uncompensated care payments, that will be distributed in FY 2018. The payments have redistributive effects, based on a hospital's uncompensated care amount relative to the uncompensated care amount for all hospitals that are estimated to receive Medicare DSH payments, and the calculated payment amount is not directly tied to a hospital's number of discharges.

- *Update to the LTCH PPS Payment Rates and Other Payment Policies.*

Based on the best available data for the 409 LTCHs in our database, we estimate that the changes to the payment rates and factors that we present in the preamble and Addendum of this final rule, which reflect the continuation of the transition of the statutory application of the site neutral payment rate, the update to the LTCH PPS standard Federal payment rate for FY 2019, and the one-time permanent adjustment of approximately 0.9 percent to the LTCH PPS standard Federal payment rate to ensure

the elimination of the 25-percent threshold policy is budget neutral, will result in an estimated increase in payments in FY 2019 of approximately \$39 million.

- *Changes to the Hospital Readmissions Reduction Program.* For FY 2019 and subsequent years, the reduction is based on a hospital's risk-adjusted readmission rate during a 3-year period for acute myocardial infarction (AMI), heart failure (HF), pneumonia, chronic obstructive pulmonary disease (COPD), total hip arthroplasty/total knee arthroplasty (THA/TKA), and coronary artery bypass graft (CABG). Overall, in this final rule, we estimate that 2,610 hospitals will have their base operating DRG payments reduced by their determined proxy FY 2019 hospital-specific readmission adjustment. As a result, we estimate that the Hospital Readmissions Reduction Program will save approximately \$566 million in FY 2019.

- *Value-Based Incentive Payments under the Hospital VBP Program.* We estimate that there will be no net financial impact to the Hospital VBP Program for the FY 2019 program year in the aggregate because, by law, the amount available for value-based incentive payments under the program in a given year must be equal to the total amount of base operating MS-DRG payment amount reductions for that year, as estimated by the Secretary. The estimated amount of base operating MS-DRG payment amount reductions for the FY 2019 program year and, therefore, the estimated amount available for value-based incentive payments for FY 2019 discharges is approximately \$1.9 billion.

- *Changes to the HAC Reduction Program.* A hospital's Total HAC score and its ranking in comparison to other hospitals in any given year depend on several

different factors. Any significant impact due to the HAC Reduction Program changes for FY 2019, including which hospitals will receive the adjustment, will depend on actual experience.

The removal of NHSN HAI measures from the Hospital IQR Program and the subsequent cessation of its validation processes for NHSN HAI measures and the creation of a validation process for the HAC Reduction program represent no net change in reporting burden across CMS hospital quality programs. However, with the finalization of our proposal to remove HAI chart-abstracted measures from the Hospital IQR Program, we anticipate a total burden shift of 43,200 hours and approximately \$1.6 million, as a result of no longer needing to validate those HAI measures under the Hospital IQR Program and beginning the validation process under the HAC Reduction Program.

- *Changes to the Hospital Inpatient Quality Reporting (IQR) Program.* Across 3,300 IPPS hospitals, we estimate that our finalized requirements for the Hospital IQR Program in this final rule will result in the following changes to costs and burdens related to information collection for this program, compared to previously adopted requirements: (1) a total collection of information burden reduction of 1,046,138 hours and a total cost reduction of approximately \$38.3 million for the CY 2019 reporting period/FY 2021 payment determination, due to the removal of ED-1, IMM-2, and VTE-6 measures; and (2) a total collection of information burden reduction of 858,000 hours and a total cost reduction of \$31.3 million for the CY 2020 reporting period/FY 2022 payment determination due to the removal of ED-2; and (3) a total collection of information

burden reduction of 43,200 hours and a total of \$1.6 million for the CY 2021 reporting period/FY 2023 payment determination due to validation of the NHSN HAI measures no longer being conducted under the Hospital IQR Program once the HAC Reduction Program begins validating these measures, as discussed in the preamble of this final rule for the HAC Reduction Program.

Further, we anticipate that the removal of 39 measures will result in a reduction in costs unrelated to information collection. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. Also, when measures are in multiple programs, maintaining the specifications for those measures, as well as the tools we need to collect, validate, analyze, and publicly report the measure data may result in costs to CMS. In addition, beneficiaries may find it confusing to see public reporting on the same measure in different programs. We anticipate that our finalized policies will reduce the above-described costs.

- *Changes Related to the LTCH QRP.* In this final rule, we are removing two measures beginning with the FY 2020 LTCH QRP and one measure beginning with the FY 2021 LTCH QRP, for a total of three measures. We also are adopting a new quality measure removal factor for the LTCH QRP. We estimate that the impact of these changes is a reduction in costs of approximately \$1,148 per LTCH annually or approximately \$482,469 for all LTCHs annually.

- *Changes to the Medicare and Medicaid Promoting Interoperability Programs.*

We believe that, overall, the finalized proposals in this final rule will reduce burden, as

described in detail in section XIV.B.9. of the preamble and Appendix A, section I.N. of this final rule.

## B. Background Summary

### 1. Acute Care Hospital Inpatient Prospective Payment System (IPPS)

Section 1886(d) of the Social Security Act (the Act) sets forth a system of payment for the operating costs of acute care hospital inpatient stays under Medicare Part A (Hospital Insurance) based on prospectively set rates. Section 1886(g) of the Act requires the Secretary to use a prospective payment system (PPS) to pay for the capital-related costs of inpatient hospital services for these “subsection (d) hospitals.” Under these PPSs, Medicare payment for hospital inpatient operating and capital-related costs is made at predetermined, specific rates for each hospital discharge. Discharges are classified according to a list of diagnosis-related groups (DRGs).

The base payment rate is comprised of a standardized amount that is divided into a labor-related share and a nonlabor-related share. The labor-related share is adjusted by the wage index applicable to the area where the hospital is located. If the hospital is located in Alaska or Hawaii, the nonlabor-related share is adjusted by a cost-of-living adjustment factor. This base payment rate is multiplied by the DRG relative weight.

If the hospital treats a high percentage of certain low-income patients, it receives a percentage add-on payment applied to the DRG-adjusted base payment rate. This add-on payment, known as the disproportionate share hospital (DSH) adjustment, provides for a percentage increase in Medicare payments to hospitals that qualify under either of two statutory formulas designed to identify hospitals that serve a disproportionate share of

low-income patients. For qualifying hospitals, the amount of this adjustment varies based on the outcome of the statutory calculations. The Affordable Care Act revised the Medicare DSH payment methodology and provides for a new additional Medicare payment that considers the amount of uncompensated care beginning on October 1, 2013.

If the hospital is training residents in an approved residency program(s), it receives a percentage add-on payment for each case paid under the IPPS, known as the indirect medical education (IME) adjustment. This percentage varies, depending on the ratio of residents to beds.

Additional payments may be made for cases that involve new technologies or medical services that have been approved for special add-on payments. To qualify, a new technology or medical service must demonstrate that it is a substantial clinical improvement over technologies or services otherwise available, and that, absent an add-on payment, it would be inadequately paid under the regular DRG payment.

The costs incurred by the hospital for a case are evaluated to determine whether the hospital is eligible for an additional payment as an outlier case. This additional payment is designed to protect the hospital from large financial losses due to unusually expensive cases. Any eligible outlier payment is added to the DRG-adjusted base payment rate, plus any DSH, IME, and new technology or medical service add-on adjustments.

Although payments to most hospitals under the IPPS are made on the basis of the standardized amounts, some categories of hospitals are paid in whole or in part based on their hospital-specific rate, which is determined from their costs in a base year. For

example, sole community hospitals (SCHs) receive the higher of a hospital-specific rate based on their costs in a base year (the highest of FY 1982, FY 1987, FY 1996, or FY 2006) or the IPPS Federal rate based on the standardized amount. SCHs are the sole source of care in their areas. Specifically, section 1886(d)(5)(D)(iii) of the Act defines an SCH as a hospital that is located more than 35 road miles from another hospital or that, by reason of factors such as an isolated location, weather conditions, travel conditions, or absence of other like hospitals (as determined by the Secretary), is the sole source of hospital inpatient services reasonably available to Medicare beneficiaries. In addition, certain rural hospitals previously designated by the Secretary as essential access community hospitals are considered SCHs.

Under current law, the Medicare-dependent, small rural hospital (MDH) program is effective through FY 2022. Through and including FY 2006, an MDH received the higher of the Federal rate or the Federal rate plus 50 percent of the amount by which the Federal rate was exceeded by the higher of its FY 1982 or FY 1987 hospital-specific rate. For discharges occurring on or after October 1, 2007, but before October 1, 2022, an MDH receives the higher of the Federal rate or the Federal rate plus 75 percent of the amount by which the Federal rate is exceeded by the highest of its FY 1982, FY 1987, or FY 2002 hospital-specific rate. MDHs are a major source of care for Medicare beneficiaries in their areas. Section 1886(d)(5)(G)(iv) of the Act defines an MDH as a hospital that is located in a rural area (or, as amended by the Bipartisan Budget Act of 2018, a hospital located in a State with no rural area that meets certain statutory criteria), has not more than 100 beds, is not an SCH, and has a high percentage of Medicare

discharges (not less than 60 percent of its inpatient days or discharges in its cost reporting year beginning in FY 1987 or in two of its three most recently settled Medicare cost reporting years).

Section 1886(g) of the Act requires the Secretary to pay for the capital-related costs of inpatient hospital services in accordance with a prospective payment system established by the Secretary. The basic methodology for determining capital prospective payments is set forth in our regulations at 42 CFR 412.308 and 412.312. Under the capital IPPS, payments are adjusted by the same DRG for the case as they are under the operating IPPS. Capital IPPS payments are also adjusted for IME and DSH, similar to the adjustments made under the operating IPPS. In addition, hospitals may receive outlier payments for those cases that have unusually high costs.

The existing regulations governing payments to hospitals under the IPPS are located in 42 CFR Part 412, Subparts A through M.

## 2. Hospitals and Hospital Units Excluded from the IPPS

Under section 1886(d)(1)(B) of the Act, as amended, certain hospitals and hospital units are excluded from the IPPS. These hospitals and units are: inpatient rehabilitation facility (IRF) hospitals and units; long-term care hospitals (LTCHs); psychiatric hospitals and units; children's hospitals; cancer hospitals; extended neoplastic disease care hospitals, and hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa). Religious nonmedical health care institutions (RNHCIs) are also excluded from the IPPS. Various sections of the Balanced

Budget Act of 1997 (BBA, Pub. L. 105-33), the Medicare, Medicaid and SCHIP [State Children's Health Insurance Program] Balanced Budget Refinement Act of 1999 (BBRA, Pub. L. 106-113), and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA, Pub. L. 106-554) provide for the implementation of PPSs for IRF hospitals and units, LTCHs, and psychiatric hospitals and units (referred to as inpatient psychiatric facilities (IPFs)). (We note that the annual updates to the LTCH PPS are included along with the IPPS annual update in this document. Updates to the IRF PPS and IPF PPS are issued as separate documents.) Children's hospitals, cancer hospitals, hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa), and RNHCIs continue to be paid solely under a reasonable cost-based system, subject to a rate-of-increase ceiling on inpatient operating costs. Similarly, extended neoplastic disease care hospitals are paid on a reasonable cost basis, subject to a rate-of-increase ceiling on inpatient operating costs.

The existing regulations governing payments to excluded hospitals and hospital units are located in 42 CFR Parts 412 and 413.

### 3. Long-Term Care Hospital Prospective Payment System (LTCH PPS)

The Medicare prospective payment system (PPS) for LTCHs applies to hospitals described in section 1886(d)(1)(B)(iv) of the Act, effective for cost reporting periods beginning on or after October 1, 2002. The LTCH PPS was established under the authority of sections 123 of the BBRA and section 307(b) of the BIPA (as codified under

section 1886(m)(1) of the Act). During the 5-year (optional) transition period, a LTCH's payment under the PPS was based on an increasing proportion of the LTCH Federal rate with a corresponding decreasing proportion based on reasonable cost principles.

Effective for cost reporting periods beginning on or after October 1, 2006 through September 30, 2015 all LTCHs were paid 100 percent of the Federal rate. Section 1206(a) of the Pathway for SGR Reform Act of 2013 (Pub. L. 113-67) established the site neutral payment rate under the LTCH PPS, which made the LTCH PPS a dual rate payment system beginning in FY 2016. Under this statute, based on a rolling effective date that is linked to the date on which a given LTCH's Federal FY 2016 cost reporting period begins, LTCHs are generally paid for discharges at the site neutral payment rate unless the discharge meets the patient criteria for payment at the LTCH PPS standard Federal payment rate. The existing regulations governing payment under the LTCH PPS are located in 42 CFR Part 412, Subpart O. Beginning October 1, 2009, we issue the annual updates to the LTCH PPS in the same documents that update the IPPS (73 FR 26797 through 26798).

#### 4. Critical Access Hospitals (CAHs)

Under sections 1814(l), 1820, and 1834(g) of the Act, payments made to critical access hospitals (CAHs) (that is, rural hospitals or facilities that meet certain statutory requirements) for inpatient and outpatient services are generally based on 101 percent of reasonable cost. Reasonable cost is determined under the provisions of section 1861(v) of the Act and existing regulations under 42 CFR Part 413.

#### 5. Payments for Graduate Medical Education (GME)

Under section 1886(a)(4) of the Act, costs of approved educational activities are excluded from the operating costs of inpatient hospital services. Hospitals with approved graduate medical education (GME) programs are paid for the direct costs of GME in accordance with section 1886(h) of the Act. The amount of payment for direct GME costs for a cost reporting period is based on the hospital's number of residents in that period and the hospital's costs per resident in a base year. The existing regulations governing payments to the various types of hospitals are located in 42 CFR Part 413.

### C. Summary of Provisions of Recent Legislation Implemented in this Final Rule

#### 1. Pathway for SGR Reform Act of 2013 (Pub. L. 113-67)

The Pathway for SGR Reform Act of 2013 (Pub. L. 113-67) introduced new payment rules in the LTCH PPS. Under section 1206 of this law, discharges in cost reporting periods beginning on or after October 1, 2015, under the LTCH PPS, receive payment under a site neutral rate unless the discharge meets certain patient-specific criteria. In this final rule, we are continuing to update certain policies that implemented provisions under section 1206 of the Pathway for SGR Reform Act.

#### 2. Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act) (Pub. L. 113-185)

The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act) (Pub. L. 113-185), enacted on October 6, 2014, made a number of changes that affect the Long-Term Care Hospital Quality Reporting Program (LTCH QRP). In this final rule, we are continuing to implement portions of section 1899B of the Act, as added by section 2(a) of the IMPACT Act, which, in part, requires LTCHs, among other

post-acute care providers, to report standardized patient assessment data, data on quality measures, and data on resource use and other measures.

3. The Medicare Access and CHIP Reauthorization Act of 2015 (Pub. L. 114-10)

Section 414 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA, Pub. L. 114-10) specifies a 0.5 percent positive adjustment to the standardized amount of Medicare payments to acute care hospitals for FYs 2018 through 2023. These adjustments follow the recoupment adjustment to the standardized amounts under section 1886(d) of the Act based upon the Secretary's estimates for discharges occurring from FYs 2014 through 2017 to fully offset \$11 billion, in accordance with section 631 of the ATRA. The FY 2018 adjustment was subsequently adjusted to 0.4588 percent by section 15005 of the 21st Century Cures Act.

4. The 21<sup>st</sup> Century Cures Act (Pub. L. 114-255)

The 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), enacted on December 13, 2016, contained the following provision affecting payments under the Hospital Readmissions Reduction Program, which we are continuing to implement in this final rule:

- Section 15002, which amended section 1886(q)(3) of the Act by adding subparagraphs (D) and (E), which requires the Secretary to develop a methodology for calculating the excess readmissions adjustment factor for the Hospital Readmissions Reduction Program based on cohorts defined by the percentage of dual-eligible patients (that is, patients who are eligible for both Medicare and full-benefit Medicaid coverage) cared for by a hospital. In this final rule, we are continuing to implement changes to the

payment adjustment factor to assess penalties based on a hospital's performance, relative to other hospitals treating a similar proportion of dual-eligible patients.

5. The Bipartisan Budget Act of 2018 (Pub. L. 115-123)

The Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted on February 9, 2018, contains provisions affecting payments under the IPPS and the LTCH PPS, which we are implementing or continuing to implement in this final rule:

- Section 50204 amended section 1886(d)(12) of the Act to provide for certain temporary changes to the low-volume hospital payment adjustment policy for FYs 2018 through 2022. For FY 2018, this provision extends the qualifying criteria and payment adjustment formula that applied for FYs 2011 through 2017. For FYs 2019 through 2022, this provision modifies the discharge criterion and payment adjustment formula. In FY 2023 and subsequent fiscal years, the qualifying criteria and payment adjustment revert to the requirements that were in effect for FYs 2005 through 2010.

- Section 50205 extends the MDH program through FY 2022. It also provides for an eligible hospital that is located in a State with no rural area to qualify for MDH status under an expanded definition if the hospital satisfies any of the statutory criteria at section 1886(d)(8)(E)(ii)(I), (II) (as of January 1, 2018), or (III) of the Act to be reclassified as rural.

- Section 51005(a) modified section 1886(m)(6) of the Act by extending the blended payment rate for site neutral payment rate LTCH discharges for cost reporting periods beginning in FY 2016 by an additional 2 years (FYs 2018 and 2019). In addition, section 51005(b) reduces the LTCH IPPS comparable per diem amount used in the site

neutral payment rate for FYs 2018 through 2026 by 4.6 percent. In this final rule, we are making conforming changes to the existing regulations.

- Section 53109 modified section 1886(d)(5)(J) of the Act to require that, beginning in FY 2019, discharges to hospice care also qualify as a postacute care transfer and are subject to payment adjustments.

#### D. Issuance of a Notice of Proposed Rulemaking

In the proposed rule that appeared in the **Federal Register** on May 7, 2018 (83 FR 20164), we set forth proposed payment and policy changes to the Medicare IPPS for FY 2019 operating costs and for capital-related costs of acute care hospitals and certain hospitals and hospital units that are excluded from IPPS. In addition, we set forth proposed changes to the payment rates, factors, and other payment and policy-related changes to programs associated with payment rate policies under the LTCH PPS for FY 2019.

Below is a general summary of the major changes that we proposed to make in the proposed rule.

#### 1. Proposed Changes to MS-DRG Classifications and Recalibrations of Relative Weights

In section II. of the preamble of the proposed rule, we included--

- Proposed changes to MS-DRG classifications based on our yearly review for FY 2019.

- Proposed adjustment to the standardized amounts under section 1886(d) of the Act for FY 2019 in accordance with the amendments made to section 7(b)(1)(B) of Pub. L. 110-90 by section 414 of the MACRA.

- Proposed recalibration of the MS-DRG relative weights.
- A discussion of the proposed FY 2019 status of new technologies approved for add-on payments for FY 2018 and a presentation of our evaluation and analysis of the FY 2019 applicants for add-on payments for high-cost new medical services and technologies (including public input, as directed by Pub. L. 108-173, obtained in a town hall meeting).

## 2. Proposed Changes to the Hospital Wage Index for Acute Care Hospitals

In section III. of the preamble to the proposed rule, we proposed to make revisions to the wage index for acute care hospitals and the annual update of the wage data. Specific issues addressed include, but are not limited to, the following:

- The proposed FY 2019 wage index update using wage data from cost reporting periods beginning in FY 2015.
- Proposal regarding other wage-related costs in the wage index.
- Calculation of the proposed occupational mix adjustment for FY 2019 based on the 2016 Occupational Mix Survey.
- Analysis and implementation of the proposed FY 2019 occupational mix adjustment to the wage index for acute care hospitals.
- Proposed application of the rural floor and the frontier State floor and the proposed expiration of the imputed floor.
- Proposals to codify policies regarding multicampus hospitals.

- Proposed revisions to the wage index for acute care hospitals, based on hospital redesignations and reclassifications under sections 1886(d)(8)(B), (d)(8)(E), and (d)(10) of the Act.

- The proposed adjustment to the wage index for acute care hospitals for FY 2019 based on commuting patterns of hospital employees who reside in a county and work in a different area with a higher wage index.

- Determination of the labor-related share for the proposed FY 2019 wage index.
- Public comment solicitation on wage index disparities.

### 3. Other Decisions and Proposed Changes to the IPPS for Operating Costs

In section IV. of the preamble of the proposed rule, we discussed proposed changes or clarifications of a number of the provisions of the regulations in 42 CFR Parts 412 and 413, including the following:

- Proposed changes to MS-DRGs subject to the postacute care transfer policy and special payment policy and implementation of the statutory changes to the postacute care transfer policy.

- Proposed changes to the inpatient hospital update for FY 2019.

- Proposed changes related to the statutory changes to the low-volume hospital payment adjustment policy.

- Proposed updated national and regional case-mix values and discharges for purposes of determining RRC status.

- The statutorily required IME adjustment factor for FY 2019.

- Proposed changes to the methodologies for determining Medicare DSH payments and the additional payments for uncompensated care.
- Proposed changes to the effective date of SCH and MDH classification status determinations.
- Proposed changes related to the extension of the MDH program.
- Proposed changes to the rules for payment adjustments under the Hospital Readmissions Reduction Program based on hospital readmission measures and the process for hospital review and correction of those rates for FY 2019.
- Proposed changes to the requirements and provision of value-based incentive payments under the Hospital Value-Based Purchasing Program.
- Proposed requirements for payment adjustments to hospitals under the HAC Reduction Program for FY 2019.
- Proposed changes to Medicare GME affiliation agreements for new urban teaching hospitals.
- Discussion of and proposals relating to the implementation of the Rural Community Hospital Demonstration Program in FY 2019.
- Proposed revisions of the hospital inpatient admission orders documentation requirements.

#### 4. Proposed FY 2019 Policy Governing the IPPS for Capital-Related Costs

In section V. of the preamble to the proposed rule, we discussed the proposed payment policy requirements for capital-related costs and capital payments to hospitals for FY 2019.

## 5. Proposed Changes to the Payment Rates for Certain Excluded Hospitals:

### Rate-of-Increase Percentages

In section VI. of the preamble of the proposed rule, we discussed—

- Proposed changes to payments to certain excluded hospitals for FY 2019.
- Proposed changes to the regulations governing satellite facilities.
- Proposed changes to the regulations governing excluded units of hospitals.
- Proposed continued implementation of the Frontier Community Health

Integration Project (FCHIP) Demonstration.

## 6. Proposed Changes to the LTCH PPS

In section VII. of the preamble of the proposed rule, we set forth—

- Proposed changes to the LTCH PPS Federal payment rates, factors, and other payment rate policies under the LTCH PPS for FY 2019.

- Proposed changes to the blended payment rate for site neutral payment rate cases.

- Proposed elimination of the 25-percent threshold policy.

## 7. Proposed Changes Relating to Quality Data Reporting for Specific Providers and

### Suppliers

In section VIII. of the preamble of the proposed rule, we address—

- Proposed requirements for the Hospital Inpatient Quality Reporting (IQR)

Program.

- Proposed changes to the requirements for the quality reporting program for PPS-exempt cancer hospitals (PCHQR Program).

- Proposed changes to the requirements under the LTCH Quality Reporting Program (LTCH QRP).

- Proposed changes to requirements pertaining to the clinical quality measurement for eligible hospitals and CAHs participating in the Medicare and Medicaid Promoting Interoperability Programs.

#### 8. Proposed Revision to the Supporting Documentation Requirements for an Acceptable Medicare Cost Report Submission

In section IX. of the preamble of the proposed rule, we set forth proposed revisions to the supporting documentation required for an acceptable Medicare cost report submission.

#### 9. Requirements for Hospitals to Make Public List of Standard Charges

In section X. of the preamble of the proposed rule, we discussed our efforts to further improve the public accessibility of hospital standard charge information, effective January 1, 2019, in accordance with section 2718(e) of the Public Health Service Act.

#### 10. Proposed Revisions Regarding Physician Certification and Recertification of Claims

In section XI. of the preamble of the proposed rule, we set forth proposed revisions to the requirements for supporting information used for physician certification and recertification of claims.

#### 11. Request for Information

In section XII. of the preamble of the proposed rule, we included a request for information on the possible establishment of CMS patient health and safety requirements for hospitals and other Medicare- and Medicaid-participating providers and suppliers for interoperable electronic health records and systems for electronic health care information exchange.

## 12. Determining Prospective Payment Operating and Capital Rates and Rate-of-Increase Limits for Acute Care Hospitals

In sections II. and III. of the Addendum to the proposed rule, we set forth the proposed changes to the amounts and factors for determining the proposed FY 2019 prospective payment rates for operating costs and capital-related costs for acute care hospitals. We proposed to establish the threshold amounts for outlier cases. In addition, in section IV. of the Addendum to the proposed rule, we addressed the update factors for determining the rate-of-increase limits for cost reporting periods beginning in FY 2019 for certain hospitals excluded from the IPPS.

## 13. Determining Prospective Payment Rates for LTCHs

In section V. of the Addendum to the proposed rule, we set forth proposed changes to the amounts and factors for determining the proposed FY 2019 LTCH PPS standard Federal payment rate and other factors used to determine LTCH PPS payments under both the LTCH PPS standard Federal payment rate and the site neutral payment rate in FY 2019. We proposed to establish the adjustments for wage levels, the labor-related share, the cost-of-living adjustment, and high-cost outliers, including the applicable fixed-loss amounts and the LTCH cost-to-charge ratios (CCRs) for both payment rates.

## 14. Impact Analysis

In Appendix A of the proposed rule, we set forth an analysis of the impact the proposed changes would have on affected acute care hospitals, CAHs, LTCHs, and PCHs.

## 15. Recommendation of Update Factors for Operating Cost Rates of Payment for Hospital Inpatient Services

In Appendix B of the proposed rule, as required by sections 1886(e)(4) and (e)(5) of the Act, we provided our recommendations of the appropriate percentage changes for FY 2019 for the following:

- A single average standardized amount for all areas for hospital inpatient services paid under the IPPS for operating costs of acute care hospitals (and hospital-specific rates applicable to SCHs and MDHs).
- Target rate-of-increase limits to the allowable operating costs of hospital inpatient services furnished by certain hospitals excluded from the IPPS.
- The LTCH PPS standard Federal payment rate and the site neutral payment rate for hospital inpatient services provided for LTCH PPS discharges.

## 16. Discussion of Medicare Payment Advisory Commission Recommendations

Under section 1805(b) of the Act, MedPAC is required to submit a report to Congress, no later than March 15 of each year, in which MedPAC reviews and makes recommendations on Medicare payment policies. MedPAC's March 2018 recommendations concerning hospital inpatient payment policies addressed the update factor for hospital inpatient operating costs and capital-related costs for hospitals under the IPPS. We addressed these recommendations in Appendix B of the proposed rule. For further information relating specifically to the MedPAC March 2018 report or to obtain a copy of the report, contact MedPAC at (202) 220-3700 or visit MedPAC's website at: <http://www.medpac.gov>.

## **II. Changes to Medicare Severity Diagnosis-Related Group (MS-DRG)**

### **Classifications and Relative Weights**

#### **A. Background**

Section 1886(d) of the Act specifies that the Secretary shall establish a classification system (referred to as diagnosis-related groups (DRGs)) for inpatient discharges and adjust payments under the IPPS based on appropriate weighting factors assigned to each DRG. Therefore, under the IPPS, Medicare pays for inpatient hospital services on a rate per discharge basis that varies according to the DRG to which a beneficiary's stay is assigned. The formula used to calculate payment for a specific case multiplies an individual hospital's payment rate per case by the weight of the DRG to which the case is assigned. Each DRG weight represents the average resources required to care for cases in that particular DRG, relative to the average resources used to treat cases in all DRGs.

Section 1886(d)(4)(C) of the Act requires that the Secretary adjust the DRG classifications and relative weights at least annually to account for changes in resource consumption. These adjustments are made to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources.

#### **B. MS-DRG Reclassifications**

For general information about the MS-DRG system, including yearly reviews and changes to the MS-DRGs, we refer readers to the previous discussions in the FY 2010 IPPS/RY 2010 LTCH PPS final rule (74 FR 43764 through 43766) and the FYs 2011 through 2018 IPPS/LTCH PPS final rules (75 FR 50053 through 50055; 76 FR 51485

through 51487; 77 FR 53273; 78 FR 50512; 79 FR 49871; 80 FR 49342; 81 FR 56787 through 56872; and 82 FR 38010 through 38085, respectively).

#### C. Adoption of the MS-DRGs in FY 2008

For information on the adoption of the MS-DRGs in FY 2008, we refer readers to the FY 2008 IPPS final rule with comment period (72 FR 47140 through 47189).

#### D. FY 2019 MS-DRG Documentation and Coding Adjustment

1. Background on the Prospective MS-DRG Documentation and Coding Adjustments for FY 2008 and FY 2009 Authorized by Pub. L. 110-90 and the Recoupment or Repayment Adjustment Authorized by Section 631 of the American Taxpayer Relief Act of 2012 (ATRA)

In the FY 2008 IPPS final rule with comment period (72 FR 47140 through 47189), we adopted the MS-DRG patient classification system for the IPPS, effective October 1, 2007, to better recognize severity of illness in Medicare payment rates for acute care hospitals. The adoption of the MS-DRG system resulted in the expansion of the number of DRGs from 538 in FY 2007 to 745 in FY 2008. By increasing the number of MS-DRGs and more fully taking into account patient severity of illness in Medicare payment rates for acute care hospitals, MS-DRGs encourage hospitals to improve their documentation and coding of patient diagnoses.

In the FY 2008 IPPS final rule with comment period (72 FR 47175 through 47186), we indicated that the adoption of the MS-DRGs had the potential to lead to increases in aggregate payments without a corresponding increase in actual patient severity of illness due to the incentives for additional documentation and coding. In that

final rule with comment period, we exercised our authority under section 1886(d)(3)(A)(vi) of the Act, which authorizes us to maintain budget neutrality by adjusting the national standardized amount, to eliminate the estimated effect of changes in coding or classification that do not reflect real changes in case-mix. Our actuaries estimated that maintaining budget neutrality required an adjustment of -4.8 percentage points to the national standardized amount. We provided for phasing in this -4.8 percentage point adjustment over 3 years. Specifically, we established prospective documentation and coding adjustments of -1.2 percentage points for FY 2008, -1.8 percentage points for FY 2009, and -1.8 percentage points for FY 2010.

On September 29, 2007, Congress enacted the TMA [Transitional Medical Assistance], Abstinence Education, and QI [Qualifying Individuals] Programs Extension Act of 2007 (Pub. L. 110-90). Section 7(a) of Pub. L. 110-90 reduced the documentation and coding adjustment made as a result of the MS-DRG system that we adopted in the FY 2008 IPPS final rule with comment period to -0.6 percentage point for FY 2008 and -0.9 percentage point for FY 2009.

As discussed in prior year rulemakings, and most recently in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56780 through 56782), we implemented a series of adjustments required under sections 7(b)(1)(A) and 7(b)(1)(B) of Pub. L. 110-90, based on a retrospective review of FY 2008 and FY 2009 claims data. We completed these adjustments in FY 2013 but indicated in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53274 through 53275) that delaying full implementation of the adjustment required under section 7(b)(1)(A) of Pub. L. 110-90 until FY 2013 resulted in payments

in FY 2010 through FY 2012 being overstated, and that these overpayments could not be recovered under Pub. L. 110-90.

In addition, as discussed in prior rulemakings and most recently in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38008 through 38009), section 631 of the ATRA amended section 7(b)(1)(B) of Pub. L. 110-90 to require the Secretary to make a recoupment adjustment or adjustments totaling \$11 billion by FY 2017. This adjustment represented the amount of the increase in aggregate payments as a result of not completing the prospective adjustment authorized under section 7(b)(1)(A) of Pub. L. 110-90 until FY 2013.

2. Adjustment Made for FY 2018 as Required under Section 414 of Pub. L. 114-10 (MACRA) and Section 15005 of Pub. L. 114-255

As stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56785), once the recoupment required under section 631 of the ATRA was complete, we had anticipated making a single positive adjustment in FY 2018 to offset the reductions required to recoup the \$11 billion under section 631 of the ATRA. However, section 414 of the MACRA (which was enacted on April 16, 2015) replaced the single positive adjustment we intended to make in FY 2018 with a 0.5 percentage point positive adjustment for each of FYs 2018 through 2023. In the FY 2017 rulemaking, we indicated that we would address the adjustments for FY 2018 and later fiscal years in future rulemaking. Section 15005 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), which was enacted on December 13, 2016, amended section 7(b)(1)(B) of the TMA, as amended by section 631 of the ATRA and section 414 of the MACRA, to reduce the adjustment for FY 2018 from

a 0.5 percentage point to a 0.4588 percentage point. As we discussed in the FY 2018 rulemaking, we believe the directive under section 15005 of Pub. L. 114-255 is clear. Therefore, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38009) for FY 2018, we implemented the required +0.4588 percentage point adjustment to the standardized amount. This is a permanent adjustment to payment rates. While we did not address future adjustments required under section 414 of the MACRA and section 15005 of Pub. L. 114-255 at that time, we stated that we expected to propose positive 0.5 percentage point adjustments to the standardized amounts for FYs 2019 through 2023.

### 3. Adjustment for FY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20176 and 20177), consistent with the requirements of section 414 of the MACRA, we proposed to implement a positive 0.5 percentage point adjustment to the standardized amount for FY 2019. We indicated that this would be a permanent adjustment to payment rates. We stated in the proposed rule that we plan to propose future adjustments required under section 414 of the MACRA for FYs 2020 through 2023 in future rulemaking.

Comment: Several commenters stated that CMS has misinterpreted the Congressional directives regarding the level of positive adjustment required for FY 2018 and FY 2019. The commenters contended that, while the positive adjustments required under section 414 of the MACRA would only total 3.0 percentage points by FY 2023, the levels of these adjustments were determined using an estimated positive “3.2 percent baseline” adjustment that otherwise would have been made in FY 2018. The commenters believed that because CMS implemented an adjustment of -1.5 percentage points instead

of the expected -0.8 percentage points in FY 2017, totaling -3.9 percentage points overall, CMS has imposed a permanent -0.7 percentage point negative adjustment beyond its statutory authority, contravening what the commenters asserted was Congress' clear instructions and intent. A majority of the commenters requested that CMS reverse its previous position and implement additional 0.7 percentage point adjustments for both FY 2018 and FY 2019. Some of the commenters requested that CMS use its statutory discretion to ensure that all 3.9 percentage points in negative adjustment be restored. In addition, some of the commenters, while acknowledging that CMS may be bound by law, expressed opposition to the permanent reductions and requested that CMS refrain from making any additional coding adjustments in the future.

Response: As we discussed in the FY 2019 IPPS/LTCH PPS proposed rule, we believe section 414 of the MACRA and section 15005 of the 21st Century Cures Act clearly set forth the levels of positive adjustments for FYs 2018 through 2023. We are not convinced that the adjustments prescribed by MACRA were predicated on a specific "baseline" adjustment level. While we had anticipated making a positive adjustment in FY 2018 to offset the reductions required to recoup the \$11 billion under section 631 of the ATRA, section 414 of the MACRA required that we implement a 0.5 percentage point positive adjustment for each of FYs 2018 through 2023, and not the single positive adjustment we intended to make in FY 2018.. As noted by the commenters, and discussed in the FY 2017 IPPS/LTCH PPS final rule, by phasing in a total positive adjustment of only 3.0 percentage points, section 414 of the MACRA would not fully restore even the 3.2 percentage points adjustment originally estimated by CMS in the

FY 2014 IPPS/LTCH PPS final rule (78 FR 50515). Moreover, as discussed in the FY 2018 IPPS/LTCH PPS final rule, Pub. L. 114-255, which further reduced the positive adjustment required for FY 2018 from 0.5 percentage point to 0.4588 percentage point, was enacted on December 13, 2016, after CMS had proposed and finalized the final negative -1.5 percentage points adjustment required under section 631 of the ATRA. We see no evidence that Congress enacted these adjustments with the intent that CMS would make an additional +0.7 percentage point adjustment in FY 2018 to compensate for the higher than expected final ATRA adjustment made in FY 2017.

After consideration of the public comments we received, we are finalizing the +0.5 percentage point adjustment to the standardized amount for FY 2019, as required under section 414 of the MACRA.

#### E. Refinement of the MS-DRG Relative Weight Calculation

##### 1. Background

Beginning in FY 2007, we implemented relative weights for DRGs based on cost report data instead of charge information. We refer readers to the FY 2007 IPPS final rule (71 FR 47882) for a detailed discussion of our final policy for calculating the cost-based DRG relative weights and to the FY 2008 IPPS final rule with comment period (72 FR 47199) for information on how we blended relative weights based on the CMS DRGs and MS-DRGs. We also refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56785 through 56787) for a detailed discussion of the history of changes to the number of cost centers used in calculating the DRG relative weights. Since FY 2014, we have calculated the IPPS MS-DRG relative weights using 19 CCRs, which now

include distinct CCRs for implantable devices, MRIs, CT scans, and cardiac catheterization.

## 2. Discussion of Policy for FY 2019

Consistent with our established policy, we calculated the final MS–DRG relative weights for FY 2019 using two data sources: the MedPAR file as the claims data source and the HCRIS as the cost report data source. We adjusted the charges from the claims to costs by applying the 19 national average CCRs developed from the cost reports. The description of the calculation of the 19 CCRs and the MS-DRG relative weights for FY 2019 is included in section II.G. of the preamble to this FY 2019 IPPS/LTCH PPS final rule. As we did with the FY 2018 IPPS/LTCH PPS final rule, for this FY 2019 final rule, we are providing the version of the HCRIS from which we calculated these 19 CCRs on the CMS website at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. Click on the link on the left side of the screen titled “FY 2019 IPPS Final Rule Home Page” or “Acute Inpatient Files for Download.”

Comment: One commenter requested that CMS use a single diagnostic radiology CCR to set weights, rather than using the separate CT and MRI cost centers. The commenter requested that if CMS maintains the separate CT and MRI cost centers, CMS not include cost reports from hospitals that use the “square foot” allocation methodology. The commenter provided an analysis to support its assertion that the CCRs for CT and MRI are incorrect and are inappropriately reducing payments under the IPPS. The commenter indicated that the charge compression hypothesis has been shown to be false with the use of the separate CT and MRI cost centers. The commenter discussed

problems with cost allocation to the CT and MRI cost centers and referenced discussions in prior IPPS/LTCH PPS rules about this issue. The commenter acknowledged that CMS did not include a specific proposal in the FY 2019 proposed rule regarding this issue.

Response: As the commenter noted, we did not make any proposal for FY 2019 relating to the number of cost centers used to calculate the relative weights. As noted previously and discussed in detail in prior rulemakings, and as noted in response to a similar public comment received last year, we have calculated the IPPS MS-DRG relative weights using 19 CCRs, including distinct CCRs for MRIs and CT scans, since FY 2014. We refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56785) for a detailed discussion of the basis for establishing these 19 CCRs. We further note that in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50518 through 50523), we presented data analyses using distinct CCRs for implantable devices, MRIs, CT scans, and cardiac catheterization.

We will continue to explore ways in which we can improve the accuracy of the cost report data and calculated CCRs used in the cost estimation process.

## F. Changes to Specific MS-DRG Classifications

### 1. Discussion of Changes to Coding System and Basis for FY 2019 MS-DRG Updates

#### a. Conversion of MS-DRGs to the International Classification of Diseases, 10th Revision (ICD-10)

As of October 1, 2015, providers use the International Classification of Diseases, 10th Revision (ICD-10) coding system to report diagnoses and procedures for Medicare hospital inpatient services under the MS-DRG system instead of the ICD-9-CM coding system, which was used through September 30, 2015. The ICD-10 coding system includes the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) for diagnosis coding and the International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS) for inpatient hospital procedure coding, as well as the ICD-10-CM and ICD-10-PCS Official Guidelines for Coding and Reporting. For a detailed discussion of the conversion of the MS-DRGs to ICD-10, we refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56787 through 56789).

#### b. Basis for FY 2019 MS-DRG Updates

CMS has previously encouraged input from our stakeholders concerning the annual IPPS updates when that input was made available to us by December 7 of the year prior to the next annual proposed rule update. As discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38010), as we work with the public to examine the ICD-10 claims data used for updates to the ICD-10 MS DRGs, we would like to examine areas where the MS-DRGs can be improved, which will require additional time for us to review requests from the public to make specific updates, analyze claims data, and consider any

proposed updates. Given the need for more time to carefully evaluate requests and propose updates, we changed the deadline to request updates to the MS-DRGs to November 1 of each year. This will provide an additional 5 weeks for the data analysis and review process. Interested parties had to submit any comments and suggestions for FY 2019 by November 1, 2017, and are encouraged to submit any comments and suggestions for FY 2020 by November 1, 2018 via the CMS MS-DRG Classification Change Request Mailbox located at: [MSDRGClassificationChange@cms.hhs.gov](mailto:MSDRGClassificationChange@cms.hhs.gov). The comments that were submitted in a timely manner for FY 2019 are discussed in this section of the preamble of this final rule.

Following are the changes that we proposed to the MS-DRGs for FY 2019 in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20177 through 20257). We invited public comments on each of the MS-DRG classification proposed changes, as well as our proposals to maintain certain existing MS-DRG classifications discussed in the proposed rule. In some cases, we proposed changes to the MS-DRG classifications based on our analysis of claims data and consultation with our clinical advisors. In other cases, we proposed to maintain the existing MS-DRG classifications based on our analysis of claims data and consultation with our clinical advisors. For the FY 2019 IPPS/LTCH PPS proposed rule, our MS-DRG analysis was based on ICD-10 claims data from the September 2017 update of the FY 2017 MedPAR file, which contains hospital bills received through September 30, 2017, for discharges occurring through September 30, 2017. In our discussion of the proposed MS-DRG reclassification

changes, we referred to our analysis of claims data from the “September 2017 update of the FY 2017 MedPAR file.”

In this FY 2019 IPPS/LTCH PPS final rule, we summarize the public comments we received on our proposals, present our responses, and state our final policies. For this FY 2019 final rule, we did not perform any further MS-DRG analysis of claims data. Therefore, all of the data analysis is based on claims data from the September 2017 update of the FY 2017 MedPAR file, which contains bills received through September 30, 2017, for discharges occurring through September 30, 2017.

As explained in previous rulemaking (76 FR 51487), in deciding whether to propose to make further modifications to the MS-DRGs for particular circumstances brought to our attention, we consider whether the resource consumption and clinical characteristics of the patients with a given set of conditions are significantly different than the remaining patients represented in the MS-DRG. We evaluate patient care costs using average costs and lengths of stay and rely on the judgment of our clinical advisors to determine whether patients are clinically distinct or similar to other patients represented in the MS-DRG. In evaluating resource costs, we consider both the absolute and percentage differences in average costs between the cases we select for review and the remainder of cases in the MS-DRG. We also consider variation in costs within these groups; that is, whether observed average differences are consistent across patients or attributable to cases that are extreme in terms of costs or length of stay, or both. Further, we consider the number of patients who will have a given set of characteristics and

generally prefer not to create a new MS-DRG unless it would include a substantial number of cases.

In our examination of the claims data, we apply the following criteria established in FY 2008 (72 FR 47169) to determine if the creation of a new complication or comorbidity (CC) or major complication or comorbidity (MCC) subgroup within a base MS-DRG is warranted:

- A reduction in variance of costs of at least 3 percent;
  - At least 5 percent of the patients in the MS-DRG fall within the CC or MCC subgroup;
  - At least 500 cases are in the CC or MCC subgroup;
  - There is at least a 20-percent difference in average costs between subgroups;
- and
- There is a \$2,000 difference in average costs between subgroups.

In order to warrant creation of a CC or MCC subgroup within a base MS-DRG, the subgroup must meet all five of the criteria.

We are making the FY 2019 ICD-10 MS-DRG GROUPER and Medicare Code Editor (MCE) Software Version 36, the ICD-10 MS-DRG Definitions Manual files Version 36 and the Definitions of Medicare Code Edits Manual Version 36 available to the public on our CMS Web site at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software.html>.

2. Pre-MDC

a. Heart Transplant or Implant of Heart Assist System

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38012), we stated our intent to review the ICD-10 logic for Pre-MDC MS-DRGs 001 and 002 (Heart Transplant or Implant of Heart Assist System with and without MCC, respectively), as well as MS-DRG 215 (Other Heart Assist System Implant) and MS-DRGs 268 and 269 (Aortic and Heart Assist Procedures Except Pulsation Balloon with and without MCC, respectively) where procedures involving heart assist devices are currently assigned. We also encouraged the public to submit any comments on restructuring the MS-DRGs for heart assist system procedures to the CMS MS-DRG Classification Change Request Mailbox located at: [MSDRGClassificationChange@cms.hhs.gov](mailto:MSDRGClassificationChange@cms.hhs.gov) by November 1, 2017.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20178 through 20179), the logic for Pre-MDC MS-DRGs 001 and 002 is comprised of two lists. The first list includes procedure codes identifying a heart transplant procedure, and the second list includes procedure codes identifying the implantation of a heart assist system. The list of procedure codes identifying the implantation of a heart assist system includes the following three codes.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
02HA0QZ	Insertion of implantable heart assist system into heart, open approach
02HA3QZ	Insertion of implantable heart assist system into heart, percutaneous approach
02HA4QZ	Insertion of implantable heart assist system into heart, percutaneous endoscopic approach

In addition to these three procedure codes, there are also 33 pairs of code combinations or procedure code “clusters” that, when reported together, satisfy the logic for assignment to MS-DRGs 001 and 002. The code combinations are represented by two procedure codes and include either one code for the insertion of the device with one code for removal of the device or one code for the revision of the device with one code for the removal of the device. The 33 pairs of code combinations are listed below.

<b>Code</b>	<b>Code Description</b>		<b>Code</b>	<b>Code Description</b>
02HA0RS	Insertion of biventricular short-term external heart assist system into heart, open approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02HA0RS	Insertion of biventricular short-term external heart assist system into heart, open approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA0RS	Insertion of biventricular short-term external heart assist system into heart, open approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02HA0RZ	Insertion of short-term external heart assist system into heart, open approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02HA0RZ	Insertion of short-term external heart assist system into heart, open approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA0RZ	Insertion of short-term external heart assist system into heart, open approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02HA3RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach

<b>Code</b>	<b>Code Description</b>		<b>Code</b>	<b>Code Description</b>
02HA3RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA3RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02HA4RZ	Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02HA4RZ	Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA4RZ	Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA0QZ	Revision of implantable heart assist system in heart, open approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach

<b>Code</b>	<b>Code Description</b>		<b>Code</b>	<b>Code Description</b>
02WA0QZ	Revision of implantable heart assist system in heart, open approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02WA0QZ	Revision of implantable heart assist system in heart, open approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA0RZ	Revision of short-term external heart assist system in heart, open approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA0RZ	Revision of short-term external heart assist system in heart, open approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02WA0RZ	Revision of short-term external heart assist system in heart, open approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA3RZ	Revision of short-term external heart assist system in heart, percutaneous approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA3RZ	Revision of short-term external heart assist system in heart, percutaneous approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach

<b>Code</b>	<b>Code Description</b>		<b>Code</b>	<b>Code Description</b>
02WA3RZ	Revision of short-term external heart assist system in heart, percutaneous approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA4QZ	Revision of implantable heart assist system in heart, percutaneous endoscopic approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA4QZ	Revision of implantable heart assist system in heart, percutaneous endoscopic approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02WA4QZ	Revision of implantable heart assist system in heart, percutaneous endoscopic approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA4RZ	Revision of short-term external heart assist system in heart, percutaneous endoscopic approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA4RZ	Revision of short-term external heart assist system in heart, percutaneous endoscopic approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02WA4RZ	Revision of short-term external heart assist system in heart, percutaneous endoscopic approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach

In response to our solicitation for public comments on restructuring the MS-DRGs for heart assist system procedures, commenters recommended that CMS maintain the current logic under the Pre-MDC MS-DRGs 001 and 002. Similar to the discussion in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38011 through 38012) involving MS-DRG 215 (Other Heart Assist System Implant), the commenters provided

examples of common clinical scenarios involving a left ventricular assist device (LVAD) and included the procedure codes that were reported under the ICD-9 based MS-DRGs in comparison to the procedure codes reported under the ICD-10 MS-DRGs, which are reflected in the following table.

<b>Procedure</b>	<b>ICD-9-CM Procedure Code</b>	<b>ICD-9 MS-DRG</b>	<b>ICD-10-PCS Codes</b>	<b>ICD-10 MS-DRG</b>
New LVAD inserted	37.66 (Insertion of implantable heart assist system)	001 or 002	02WA0QZ (Insertion of implantable heart assist system into heart, open approach) 02WA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach) 02WA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach)	001 or 002

Procedure	ICD-9-CM Procedure Code	ICD-9 MS-DRG	ICD-10-PCS Codes	ICD-10 MS-DRG
LVAD Exchange—existing LVAD is removed and replaced with either new LVAD system or new LVAD pump	37.63 (Repair of heart assist system)	215	02PA0QZ (Removal of implantable heart assist system from heart, open approach) 02PA3QZ (Removal of implantable heart assist system from heart, percutaneous approach) 02PA4QZ (Removal of implantable heart assist system from heart, percutaneous endoscopic approach)  and  02WA0QZ (Insertion of implantable heart assist system into heart, open approach) 02WA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach) 02WA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach)	001 or 002

<b>Procedure</b>	<b>ICD-9-CM Procedure Code</b>	<b>ICD-9 MS-DRG</b>	<b>ICD-10-PCS Codes</b>	<b>ICD-10 MS-DRG</b>
LVAD revision and repair-existing LVAD is adjusted or repaired without removing the existing LVAD device	37.63 (Repair of heart assist system)	215	02WA0QZ (Revision of implantable heart assist system in heart, open approach) 02WA3QZ (Revision of implantable heart assist system in heart, percutaneous approach) 02WA4QZ (Revision of implantable heart assist system in heart, percutaneous endoscopic approach)	215

The commenters noted that, for Pre-MDC MS-DRGs 001 and 002, the procedures involving the insertion of an implantable heart assist system, such as the insertion of a LVAD, and the procedures involving exchange of an LVAD (where an existing LVAD is removed and replaced with either a new LVAD or a new LVAD pump) demonstrate clinical similarities and utilize similar resources. Although the commenters recommended that CMS maintain the current logic under the Pre-MDC MS-DRGs 001 and 002, they also recommended that CMS continue to monitor the data in these MS-DRGs for future consideration of distinctions (for example, different approaches and evolving technologies) that may impact the clinical and resource use of patients undergoing procedures utilizing heart assist devices. The commenters also requested that coding guidance be issued for assignment of the correct ICD-10-PCS procedure codes describing LVAD exchanges to encourage accurate reporting of these procedures.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20180), we stated that we agree with the commenters that we should continue to monitor the data in Pre-MDC MS-DRGs 001 and 002 for future consideration of distinctions (for example, different approaches and evolving technologies) that may impact the clinical and resource use of patients undergoing procedures utilizing heart assist devices. In response to the request that coding guidance be issued for assignment of the correct ICD-10-PCS procedure codes describing LVAD exchanges to encourage accurate reporting of these procedures, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38012), coding advice is issued independently from payment policy. We also noted that, historically, we have not provided coding advice in rulemaking with respect to policy (82 FR 38045). We collaborate with the American Hospital Association (AHA) through the Coding Clinic for ICD-10-CM and ICD-10-PCS to promote proper coding. We recommended that the requestor and other interested parties submit any questions pertaining to correct coding for these technologies to the AHA.

In response to the public comments we received on this topic, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20180), we provided the results of our claims analysis from the September 2017 update of the FY 2017 MedPAR file for cases in Pre-MDC MS-DRGs 001 and 002. Our findings are shown in the following table.

<b>MS-DRGs for Heart Transplant or Implant of Heart Assist System</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 001--All cases	1,993	35.6	\$185,660
MS-DRG 002--All cases	179	18.3	\$99,635

As shown in this table, for MS-DRG 001, there were a total of 1,993 cases with an average length of stay of 35.6 days and average costs of \$185,660. For MS-DRG 002, there were a total of 179 cases with an average length of stay of 18.3 days and average costs of \$99,635.

We then examined claims data in Pre-MDC MS-DRGs 001 and 002 for cases that reported one of the three procedure codes identifying the implantation of a heart assist system such as the LVAD. Our findings are shown in the following table.

<b>MS-DRGs for Heart Transplant or Implant of Heart Assist System</b>			
<b>MS-DRG</b>	<b>Number of cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 001--All cases	1,993	35.6	\$185,660
MS-DRG 001--Cases with procedure code 02HA0QZ (Insertion of implantable heart assist system into heart, open approach)	1,260	35.5	\$206,663
MS-DRG 001--Cases with procedure code 02HA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach)	1	8	\$33,889
MS-DRG 001--Cases with procedure code 02HA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach)	0	0	\$0
MS-DRG 002--All cases	179	18.3	\$99,635
MS-DRG 002--Cases with procedure code 02HA0QZ (Insertion of implantable heart assist system into heart, open approach)	82	19.9	\$131,957
MS-DRG 002--Cases with procedure code 02HA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach)	0	0	\$0
MS-DRG 002--Cases with procedure code 02HA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach)	0	0	\$0

As shown in this table, for MS-DRG 001, there were a total of 1,260 cases reporting procedure code 02HA0QZ (Insertion of implantable heart assist system into heart, open approach) with an average length of stay of 35.5 days and average costs of \$206,663. There was one case that reported procedure code 02HA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach) with an average length of stay of 8 days and average costs of \$33,889. There were no cases reporting procedure code 02HA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach). For MS-DRG 002, there were a total of 82 cases reporting procedure code 02HA0QZ (Insertion of implantable heart assist system into heart, open approach) with an average length of stay of 19.9 days and average costs of \$131,957. There were no cases reporting procedure codes 02HA3QZ (Insertion of implantable heart assist system into heart, percutaneous approach) or 02HA4QZ (Insertion of implantable heart assist system into heart, percutaneous endoscopic approach).

We also examined the cases in MS-DRGs 001 and 002 that reported one of the possible 33 pairs of code combinations or clusters. Our findings are shown in the following 8 tables. The first table provides the total number of cases reporting a procedure code combination (or cluster) compared to all of the cases in the respective MS-DRG, followed by additional detailed tables showing the number of cases, average length of stay, and average costs for each specific code combination that was reported in the claims data.

<b>Heart Transplant or Implant of Heart Assist System</b>			
<b>MS-DRGs 001 and 002</b>	<b>Number of cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 001--All cases	1,993	35.6	\$185,660
MS-DRG 001--Cases with a procedure code combination (cluster)	149	28.4	\$179,607
MS-DRG 002--All cases	179	18.3	\$99,635
MS-DRG 002--Cases with a procedure code combination (cluster)	6	3.8	\$57,343

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA0RS (Insertion of biventricular short-term external heart assist system into heart, open approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	3	20.3	\$121,919
Cases with a procedure code combination of 02HA0RS (Insertion of biventricular short-term external heart assist system into heart, open approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	2	12	\$114,688
All cases reporting one or more of the above procedure code combinations in MS-DRG 001	<b>5</b>	<b>17</b>	<b>\$119,027</b>

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA0RZ (Insertion of short-term external heart assist system into heart, open approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	30	55.6	\$351,995
Cases with a procedure code combination of 02HA0RZ (Insertion of short-term external heart assist system into heart, open approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	19	29.8	\$191,163
All cases reporting one or more of the above procedure code combinations in MS-DRG 001	<b>49</b>	<b>45.6</b>	<b>\$289,632</b>
<b>MS-DRG 002</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA0RZ (Insertion of short-term external heart assist system into heart, open approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	1	4	\$48,212

Cases with a procedure code combination of 02HA0RZ (Insertion of short-term external heart assist system into heart, open approach)			
With			
02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	2	4.5	\$66,386
All cases reporting one or more of the above procedure code combinations in MS-DRG 002	3	4.3	\$60,328
<b>All cases reporting one or more of the above procedure code combinations across both MS-DRGs 001 and 002</b>	<b>52</b>	<b>43.3</b>	<b>\$276,403</b>

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA3RS (Insertion of biventricular short-term external heart assist system into heart, percutaneous approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	3	43.3	\$233,330
Cases with a procedure code combination of 02HA3RS (Insertion of biventricular short-term external heart assist system into heart, percutaneous approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	24	14.8	\$113,955
Cases with a procedure code combination of 02HA3RS (Insertion of biventricular short-term external heart assist system into heart, percutaneous approach)  With  02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach)	1	44	\$153,284
All cases reporting one or more of the above procedure code combinations in MS-DRG 001	28	18.9	\$128,150
<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 002</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA3RS (Insertion of biventricular short-	2	4	\$30,954

term external heart assist system into heart, percutaneous approach)			
With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)			
All cases reporting one of the above procedure code combinations in MS-DRG 002	2	4	\$30,954
All cases reporting one or more of the above procedure code combinations across both MS-DRGs 001 and 002	<b>30</b>	<b>17.9</b>	<b>\$121,670</b>

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02HA4RZ (Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	4	17.3	\$154,885
Cases with a procedure code combination of 02HA4RZ (Insertion of short-term external heart assist system into heart, open approach)  With  02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach)	2	15.5	\$80,852
All cases reporting one or more of the above	<b>6</b>	<b>16.7</b>	<b>\$130,207</b>

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
procedure code combinations in MS-DRG 001			

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02WA0QZ (Revision of implantable heart assist system in heart, open approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	1	105	\$516,557

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02WA0RZ (Revision of short-term external heart assist system in heart, open approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	2	40	\$285,818
Cases with a procedure code combination of 02WA0RZ (Revision of short-term external heart assist system in heart, open approach)  With  02PA03Z (Removal of short-term external heart assist system from heart, percutaneous approach)	1	43	\$372,673
All cases reporting one or more of the above procedure code combinations in MS-DRG 001	<b>3</b>	<b>41</b>	<b>\$314,770</b>

<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 001</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02WA3RZ (Revision of short-term external heart assist system in heart, percutaneous approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	2	24	\$123,084
Cases with a procedure code combination of 02WA3RZ (Revision of short-term external heart assist system in heart, percutaneous approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	55	14.7	\$104,963
All cases reporting one or more of the above procedure code combinations in MS-DRG 001	<b>57</b>	<b>15</b>	<b>\$105,599</b>
<b>Procedure Code Combinations for Implant of Heart Assist System</b>			
<b>MS-DRG 002</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with a procedure code combination of 02WA3RZ (Revision of short-term external heart assist system in heart, percutaneous approach)  With  02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	1	2	\$101,168
<b>All cases reporting one or more of the above procedure code combinations across both MS-DRGs 001 and 002</b>	<b>58</b>	<b>14.8</b>	<b>\$105,522</b>
<b>Procedure Code Combinations for Implant of Heart Assist System</b>			

MS-DRG 001	Number of Cases	Average Length of Stay	Average Costs
Cases with a procedure code combination of 02WA4RZ (Revision of short-term external heart assist system in heart, percutaneous endoscopic approach)  With  02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	1	10	\$112,698

We did not find any cases reporting the following procedure code combinations (clusters) in the claims data.

02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach
02HA4RS	Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA0RZ	Removal of short-term external heart assist system from heart, open approach
02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA3RZ	Removal of short-term external heart assist system from heart, percutaneous approach

02WA3QZ	Revision of implantable heart assist system in heart, percutaneous approach	with	02PA4RZ	Removal of short-term external heart assist system from heart, percutaneous endoscopic approach
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The data show that there are differences in the average length of stay and average costs for cases in Pre-MDC MS-DRGs 001 and 002 according to the type of procedure (insertion, revision, or removal), the type of device (biventricular short-term external heart assist system, short-term external heart assist system or implantable heart assist system), and the approaches that were utilized (open, percutaneous, or percutaneous endoscopic). In the FY 2019 IPPS/LTCH PPS proposed rule, we agreed with the commenters’ recommendation to maintain the structure of Pre-MDC MS-DRGs 001 and 002 for FY 2019 and stated that we would continue to analyze the claims data.

Comment: Commenters supported CMS’ proposal to maintain the current structure of Pre-MDC MS-DRGs 001 and 002 for FY 2019, and to continue to analyze claims data for consideration of future modifications. The commenters agreed with CMS that current claims data do not yet reflect recent advice published in *Coding Clinic* for ICD-10-CM/PCS regarding the coding of procedures involving external heart assist devices or recent changes to ICD-10-PCS codes for these procedures.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are maintaining the current structure of Pre-MDC MS-DRGs 001 and 002 for FY 2019.

Commenters also suggested that CMS maintain the current logic for MS-DRG 215 (Other Heart Assist System Implant), but they recommended that CMS continue to

monitor the data in MS-DRG 215 for future consideration of distinctions (for example, different approaches and evolving technologies) that may impact the clinical and resource use of procedures utilizing heart assist devices. As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20184), we also received a request to review claims data for procedures involving extracorporeal membrane oxygenation (ECMO) in combination with the insertion of a percutaneous short-term external heart assist device to determine if the current MS-DRG assignment is appropriate.

The logic for MS-DRG 215 is comprised of the procedure codes shown in the following table, for which we examined claims data in the September 2017 update of the FY 2017 MedPAR file in response to the commenters' requests. Our findings are shown in the following table.

<b>MS-DRG 215 (Other Heart Assist System Implant)</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
All cases	3,428	8.7	\$68,965
Cases with procedure code 02HA0RJ (Insertion of short-term external heart assist system into heart, intraoperative, open approach)	0	0	0
Cases with procedure code 02HA0RS (Insertion of biventricular short-term external heart assist system into heart, open approach)	9	10	\$118,361
Cases with procedure code 02HA0RZ (Insertion of short-term external heart assist system into heart, open approach)	66	11.5	\$99,107
Cases with procedure code 02HA3RJ (Insertion of short-term external heart assist system into heart, intraoperative, percutaneous approach)	0	0	0

<b>MS-DRG 215 (Other Heart Assist System Implant)</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with procedure code 02HA3RS (Insertion of biventricular short-term external heart assist system into heart, percutaneous approach)	117	7.2	\$64,302
Cases with procedure code 02HA3RZ (Insertion of short-term external heart assist system into heart, percutaneous approach)	3,136	8.4	\$67,670
Cases with procedure code 02HA4RJ (Insertion of short-term external heart assist system into heart, intraoperative, percutaneous endoscopic approach)	0	0	0
Cases with procedure code 02HA4RS (Insertion of biventricular short-term external heart assist system into heart, percutaneous endoscopic approach)	1	2	\$43,988
Cases with procedure code 02HA4RZ (Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach)	31	5.3	\$57,042
Cases with procedure code 02WA0JZ (Revision of synthetic substitute in heart, open approach)	1	84	\$366,089
Cases with procedure code 02WA0QZ (Revision of implantable heart assist system in heart, open approach)	56	25.1	\$123,410
Cases with procedure code 02WA0RS (Revision of biventricular short-term external heart assist system in heart, open approach)	0	0	0
Cases with procedure code 02WA0RZ (Revision of short-term external heart assist system in heart, open approach)	8	13.5	\$99,378
Cases with procedure code 02WA3QZ (Revision of implantable heart assist system in heart, percutaneous approach)	0	0	0

<b>MS-DRG 215 (Other Heart Assist System Implant)</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Cases with procedure code 02WA3RS (Revision of biventricular short-term external heart assist system in heart, percutaneous approach)	0	0	0
Cases with procedure code 02WA3RZ (Revision of short-term external heart assist system in heart, percutaneous approach)	80	10	\$71,077
Cases with procedure code 02WA4QZ (Revision of implantable heart assist system in heart, percutaneous endoscopic approach)	0	0	0
Cases with procedure code 02WA4RS (Revision of biventricular short-term external heart assist system in heart, percutaneous endoscopic approach)	0	0	0
Cases with procedure code 02WA4RZ (Revision of short-term external heart assist system in heart, percutaneous endoscopic approach)	0	0	0

As shown in this table, for MS-DRG 215, we found a total of 3,428 cases with an average length of stay of 8.7 days and average costs of \$68,965. For procedure codes describing the insertion of a biventricular short-term external heart assist system with open, percutaneous or percutaneous endoscopic approaches, we found a total of 127 cases with an average length of stay ranging from 2 to 10 days and average costs ranging from \$43,988 to \$118,361. For procedure codes describing the insertion of a short-term external heart assist system with open, percutaneous or percutaneous endoscopic approaches, we found a total of 3,233 cases with an average length of stay ranging from

5.3 days to 11.5 days and average costs ranging from \$57,042 to \$99,107. For procedure codes describing the revision of a short-term external heart assist system with open or percutaneous approaches, we found a total of 88 cases with an average length of stay ranging from 10 to 13.5 days and average costs ranging from \$71,077 to \$99,378. We found 1 case reporting procedure code 02WA0JZ (Revision of synthetic substitute in heart, open approach), with an average length of stay of 84 days and average costs of \$366,089. Lastly, we found 56 cases reporting procedure code 02WA0QZ (Revision of implantable heart assist system in heart, open approach) with an average length of stay of 25.1 days and average costs of \$123,410.

As the data show, there is a wide range in the average length of stay and the average costs for cases reporting procedures that involve a biventricular short-term external heart assist system versus a short-term external heart assist system. There is an even greater range in the average length of stay and the average costs when comparing the revision of a short-term external heart assist system to the revision of a synthetic substitute in the heart or to the revision of an implantable heart assist system.

In the proposed rule, we stated that we agreed with the commenters that continued monitoring of the data and further analysis is necessary prior to proposing any modifications to MS-DRG 215. As stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38012), we are aware that the AHA published Coding Clinic advice that clarified coding and reporting for certain external heart assist devices due to the technology being approved for new indications. The current claims data do not yet reflect that updated guidance. We also noted that there have been recent updates to the descriptions of the

codes for heart assist devices in the past year. For example, the qualifier “intraoperative” was added effective October 1, 2017 (FY 2018) to the procedure codes describing the insertion of short-term external heart assist system procedures to distinguish between procedures where the device was only used intraoperatively and was removed at the conclusion of the procedure versus procedures where the device was not removed at the conclusion of the procedure and for which that qualifier would not be reported. The current claims data do not yet reflect these new procedure codes, which are displayed in the following table and are assigned to MS-DRG 215.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
02HA0RJ	Insertion of short-term external heart assist system into heart, intraoperative, open approach
02HA3RJ	Insertion of short-term external heart assist system into heart, intraoperative, percutaneous approach
02HA4RJ	Insertion of short-term external heart assist system into heart, intraoperative, percutaneous endoscopic approach

In the proposed rule, we indicated that our clinical advisors also agreed that additional claims data are needed for analysis prior to proposing any changes to MS-DRG 215. Therefore, we did not propose to make any modifications to MS-DRG 215 for FY 2019.

Comment: Commenters supported CMS’ proposal to not make any modifications to MS-DRG 215 for FY 2019 and supported continued analysis of claims data for consideration of modifications in future rulemaking. The commenters noted that the proposal was reasonable, given the data, the ICD-10-PCS procedure codes, and information provided.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to maintain the current structure of MS-DRG 215 for FY 2019.

As stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20185) and earlier in this section, we also received a request to review cases reporting the use of ECMO in combination with the insertion of a percutaneous short-term external heart assist device. Under ICD-10-PCS, ECMO is identified with procedure code 5A15223 (Extracorporeal membrane oxygenation, continuous) and the insertion of a percutaneous short-term external heart assist device is identified with procedure code 02HA3RZ (Insertion of short-term external heart assist system into heart, percutaneous approach). According to the commenter, when ECMO procedures are performed percutaneously, they are less invasive and less expensive than traditional ECMO. The commenter also noted that, currently under ICD-10-PCS, there is not a specific procedure code to identify percutaneous ECMO, and providers are only able to report ICD-10-PCS procedure code 5A15223, which may be inappropriately resulting in a higher paying MS-DRG. Therefore, the commenter submitted a separate request to create a new ICD-10-PCS procedure code specifically for percutaneous ECMO which was discussed at the March 6-7, 2018 ICD-10 Coordination and Maintenance Committee Meeting. We refer readers to section II.F.18. of the preamble of this final rule for further information regarding this meeting and the discussion for a new procedure code.

The requestor suggested that cases reporting a procedure code for ECMO in combination with the insertion of a percutaneous short-term external heart assist device

could be reassigned from Pre-MDC MS-DRG 003 (ECMO or Tracheostomy with Mechanical Ventilation > 96 Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. Procedure) to MS-DRG 215. Our analysis involved examining cases in Pre-MDC MS-DRG 003 in the September 2017 update of the FY 2017 MedPAR file for cases reporting ECMO with and without the insertion of a percutaneous short-term external heart assist device. Our findings are shown in the following table.

<b>ECMO and Percutaneous Short-Term External Heart Assist Device</b>			
<b>Pre-MDC MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 003--All cases	14,383	29.5	\$118,218
MS-DRG 003--Cases with procedure code 5A15223 (Extracorporeal membrane oxygenation, continuous)	1,786	19	\$119,340
MS-DRG 003--Cases with procedure code 5A15223 (Extracorporeal membrane oxygenation, continuous) and 02HA3RZ (Insertion of short-term external heart assist system into heart, percutaneous approach)	94	11.4	\$110,874
MS-DRG 003--Cases with procedure code 5A15223 (Extracorporeal membrane oxygenation, continuous) and 02HA4RZ (Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach)	1	1	\$64,319

As shown in this table, we found a total of 14,383 cases with an average length of stay of 29.5 days and average costs of \$118,218 in Pre-MDC MS-DRG 003. We found 1,786 cases reporting procedure code 5A15223 (Extracorporeal membrane oxygenation, continuous) with an average length of stay of 19 days and average costs of \$119,340. We

found 94 cases reporting procedure code 5A15223 and 02HA3RZ (Insertion of short-term external heart assist system into heart, percutaneous approach) with an average length of stay of 11.4 days and average costs of \$110,874. Lastly, we found 1 case reporting procedure code 5A15223 and 02HA4RZ (Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach) with an average length of stay of 1 day and average costs of \$64,319.

We also reviewed the cases in MS-DRG 215 for procedure codes 02HA3RZ and 02HA4RZ. Our findings are shown in the following table.

<b>Percutaneous Short-Term External Heart Assist Device</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 215--All cases	3,428	8.7	\$68,965
MS-DRG 215--Cases with procedure code 02HA3RZ (Insertion of short-term external heart assist system into heart, percutaneous approach)	3,136	8.4	\$67,670
MS-DRG 215--Cases with procedure code 02HA4RZ (Insertion of short-term external heart assist system into heart, percutaneous endoscopic approach)	31	5.3	\$57,042

As shown in this table, we found a total of 3,428 cases with an average length of stay of 8.7 days and average costs of \$68,965. We found a total of 3,136 cases reporting procedure code 02HA3RZ with an average length of stay of 8.4 days and average costs of \$67,670. We found a total of 31 cases reporting procedure code 02HA4RZ with an average length of stay of 5.3 days and average costs of \$57,042.

We stated in the proposed rule that, for Pre-MDC MS-DRG 003, while the average length of stay and average costs for cases where procedure code 5A15223 was reported with procedure code 02HA3RZ or procedure code 02HA4RZ are lower than the average length of stay and average costs for cases where procedure code 5A15223 was reported alone, we are unable to determine from the data if those ECMO procedures were performed percutaneously in the absence of a unique code. In addition, the one case reporting procedure code 5A15223 with 02HA4RZ only had a 1 day length of stay and it is unclear from the data what the circumstances of that case may have involved. For example, the patient may have been transferred or may have expired. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20186), we proposed to not reassign cases reporting procedure code 5A15223 when reported with procedure code 02HA3RZ or procedure code 02HA4RZ for FY 2019. We stated in the proposed rule that our clinical advisors agreed that until there is a way to specifically identify percutaneous ECMO in the claims data to enable further analysis, a proposal at this time is not warranted.

Comment: Commenters supported CMS' proposal to not reassign cases reporting the use of ECMO (procedure code 5A15223) in combination with the insertion of a percutaneous short-term external heart assist device (procedure code 02HA3RZ or procedure code 02HA4RZ) for FY 2019.

Response: We appreciate the commenters' support.

Comment: Other commenters acknowledged that new ICD-10-PCS procedure codes that identify percutaneous ECMO procedures were made publicly available in

May 2018. The commenters suggested that the new procedure codes be assigned to MS-DRGs that reflect cases representing patients with similar clinical characteristics and whose treatment requires similar resource utilization, such as MS-DRG 215. Some commenters specifically requested that the new procedure code describing a percutaneous veno-arterial (VA) ECMO procedure be considered for assignment to MS-DRG 215 versus Pre-MDC MS-DRG 003 because MS-DRG 215 is the primary MS-DRG for procedures involving the implantation of peripheral heart assist pumps, with similar cases representing patient conditions and clinical coherence. The commenters noted that the percutaneous ECMO procedure is less invasive and less expensive than the traditional ECMO procedure, and has the clinical similarities and requires similar resource utilization as procedures currently assigned to MS-DRG 215, such as the percutaneous ventricular assist devices procedure.

Another commenter suggested that CMS should assign cases representing patients receiving treatment involving the peripheral VA ECMO procedure to MS-DRG 215 or another MS-DRG within MDC 5. The commenter stated that cases representing patients currently assigned to MS-DRG 215 are clinically coherent to the characteristics of the patients who undergo a peripheral VA ECMO procedure. Another commenter recommended that the new procedure code describing a percutaneous veno-venous (VV) ECMO procedure be considered for assignment to MS-DRG 004 or another MS-DRG within MDC 4 because the indication is to provide respiratory support.

Response: The commenters are correct that the FY 2019 ICD-10-PCS procedure code files (which are available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Coding/ICD10/2019-ICD-10-PCS.html>) include new ICD-10-PCS procedure codes that identify percutaneous ECMO procedures. In addition, the files also show that the current code for ECMO procedures (ICD-10-PCS code 5A15223) has been revised. These new procedure codes, and the revised ECMO procedure code and description, effective October 1, 2018, are shown in the following table.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
5A1522F	Extracorporeal Oxygenation, Membrane, Central
5A1522G	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial
5A1522H	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous

In response to the commenters’ suggestions to assign the new procedure codes for percutaneous ECMO procedures to MS-DRG 215, we note that the new procedure codes created to describe percutaneous ECMO procedures were not finalized at the time of the proposed rule. In addition, the deletion of the current procedure code for ECMO (ICD-10-PCS code 5A15223) and the creation of the new procedure code for central ECMO were not finalized at the time of the proposed rule. As these codes were not finalized at the time of the proposed rule, they were not reflected in Table 6B.--New Procedure Codes (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) associated with the FY 2019 IPPS/LTCH PPS proposed rule. Therefore, because these procedure codes were not yet approved, there were no proposed MDC, MS-DRG, or O.R. and non-O.R. designations for these new procedure codes.

Consistent with our annual process of assigning new procedure codes to MDCs and MS-DRGs, and designating a procedure as an O.R. or non-O.R. procedure, we reviewed the predecessor procedure code assignments. The predecessor procedure code (ICD-10-PCS code 5A15223) for the new percutaneous ECMO procedure codes describes an open approach which requires an incision along the sternum (sternotomy) and is performed for open heart surgery. It is considered extremely invasive and carries significant risks for complications, including bleeding, infection, and vessel injury. For central ECMO, arterial cannulation typically occurs directly into the ascending aorta and venous cannulation occurs directly into the right atrium. Conversely, percutaneous (peripheral) ECMO does not require a sternotomy and can be performed in the intensive care unit or at the bedside. The cannulae are placed percutaneously and can utilize a variety of configurations, according to the indication (VA or VV) and patient age (adult vs. pediatric). While percutaneous ECMO also carries risks, they differ from those of central ECMO. For example, our clinical advisors note that patients receiving percutaneous ECMO are at a greater risk of suffering vascular complications.

Upon review, our clinical advisors do not support assigning the new procedure codes for peripheral ECMO procedures to the same MS-DRG as the predecessor code for open (central) ECMO in Pre-MDC MS-DRG 003. Our clinical advisors also do not agree with designating percutaneous ECMO procedures as O.R. procedures because they are less resource intensive compared to open ECMO procedures. As shown in Table 6B.-- New Procedure Codes associated with this final rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service->

[Payment/AcuteInpatientPPS/index.html](#)), the new procedure codes for percutaneous ECMO procedures have been designated as non-O.R. procedures that will affect the MS-DRG assignment for specific medical MS-DRGs. Effective October 1, 2018, the MS-DRGs for which the percutaneous ECMO procedures will affect MS-DRG assignment are shown in the following table, along with the revised MS-DRG titles.

<b>MDC</b>	<b>MS-DRG</b>	<b>MS-DRG Title</b>
4	207	Respiratory System Diagnosis with Ventilator Support >96 Hours or Peripheral Extracorporeal Membrane Oxygenation (ECMO)
5	291	Heart Failure and Shock with MCC or Peripheral Extracorporeal Membrane Oxygenation (ECMO)
5	296	Cardiac Arrest, Unexplained with MCC or Peripheral Extracorporeal Membrane Oxygenation (ECMO)
18	870	Septicemia or Severe Sepsis with MV>96 Hours or Peripheral Extracorporeal Membrane Oxygenation (ECMO)

Our clinical advisors support the designation of the peripheral ECMO procedures as a non-O.R. procedure affecting the MS-DRG assignment of MS-DRG 207 because they consider the procedure to be similar to providing mechanical ventilation greater than 96 hours in terms of both clinical severity and resource use. Because any respiratory diagnosis classified under MDC 4 with mechanical ventilation greater than 96 hours is assigned to MS-DRG 207, it is reasonable to expect that any patient with a respiratory diagnosis who requires treatment involving a peripheral ECMO procedure should also be assigned to MS-DRG 207. The same rationale was applied for MS-DRG 870, which also includes mechanical ventilation greater than 96 hours. In addition, based on the common clinical indications for which a percutaneous ECMO procedure is utilized, such as cardiogenic shock and cardiac arrest, our clinical advisors determined that MS-DRGs 291

(Heart Failure and Shock with MCC) and 296 (Cardiac Arrest, Unexplained with MCC) also are appropriate for a percutaneous ECMO procedure to affect the MS-DRG assignment. The MS-DRG assignment for a central ECMO procedure will remain in Pre-MDC MS-DRG 003.

In cases where a percutaneous external heart assist device is utilized, in combination with a percutaneous ECMO procedure, effective October 1, 2018, the ICD-10 MS-DRG Version 36 GROUPER logic results in a case assignment to MS-DRG 215 because the percutaneous external heart assist device procedure is designated as an O.R. procedure and assigned to MS-DRG 215.

Because the procedure codes describing percutaneous ECMO procedures are new, becoming effective October 1, 2018, we do not yet have any claims data to analyze. Once claims data becomes available, we can examine the volume, and length of stay and cost data to determine if modifications to the assignment of these procedure codes are warranted.

After consideration of the public comments we received, we are finalizing our proposal to not reassign cases reporting ICD-10-PCS procedure code 5A15223 when reported with ICD-10-PCS procedure code 02HA3RZ or ICD-10-PCS procedure code 02HA4RZ for FY 2019. Consistent with our policy for determining MS-DRG assignment for new codes and for the reasons discussed, the two new procedure codes describing percutaneous ECMO procedures discussed and displayed in the table above, under the ICD-10 MS-DRGs Version 36 GROUPER logic, effective October 1, 2018, are designated as non-O.R. procedures impacting the MS-DRG assignment of MS-DRGs

207, 291, 296, and 870. The MS-DRG assignment for the central ECMO procedure remains in Pre-MDC MS-DRG 003.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20186), we also discussed that a commenter also suggested that CMS maintain the current logic for MS-DRGs 268 and 269 (Aortic and Heart Assist Procedures Except Pulsation Balloon with and without MCC, respectively), but recommended that CMS continue to monitor the data in these MS-DRGs for future consideration of distinctions (for example, different approaches and evolving technologies) that may impact the clinical and resource use of procedures involving heart assist devices.

The logic for heart assist system devices in MS-DRGs 268 and 269 is comprised of the procedure codes shown in the following table, for which we examined claims data in the September 2017 update of the FY 2017 MedPAR file in response to the commenter's request. Our findings are shown in the following table.

<b>MS-DRGs for Aortic and Heart Assist Procedures Except Pulsation Balloon</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 268—All cases	3,798	9.6	\$49,122
MS-DRG 268—Cases with procedure code 02PA0QZ (Removal of implantable heart assist system from heart, open approach)	16	23.4	\$79,850
MS-DRG 268—Cases with procedure code 02PA0RS (Removal of biventricular short-term external heart assist system from heart, open approach)	0	0	0
MS-DRG 268—Cases with procedure code 02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	0	0	0

<b>MS-DRGs for Aortic and Heart Assist Procedures Except Pulsation Balloon</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 268—Cases with procedure code 02PA3QZ (Removal of implantable heart assist system from heart, percutaneous approach)	28	10.5	\$31,797
MS-DRG 268—Cases with procedure code 02PA3RS (Removal of biventricular short-term external heart assist system from heart, percutaneous approach)	0	0	0
MS-DRG 268—Cases with procedure code 02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	96	12.4	\$51,469
MS-DRG 268—Cases with procedure code 02PA4QZ (Removal of implantable heart assist system from heart, percutaneous endoscopic approach)	5	7.8	\$37,592
MS-DRG 268—Cases with procedure code 02PA4RS (Removal of biventricular short-term external heart assist system from heart, percutaneous endoscopic approach)	0	0	0
MS-DRG 268—Cases with procedure code 02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach)	0	0	0
MS-DRG 269—All cases	16,900	2.4	\$30,793
MS-DRG 269—Cases with procedure code 02PA0QZ (Removal of implantable heart assist system from heart, open approach)	10	8	\$23,741
MS-DRG 269—Cases with procedure code 02PA0RS (Removal of biventricular short-term external heart assist system from heart, open approach)	0	0	0
MS-DRG 269—Cases with procedure code 02PA0RZ (Removal of short-term external heart assist system from heart, open approach)	0	0	0

<b>MS-DRGs for Aortic and Heart Assist Procedures Except Pulsation Balloon</b>			
	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 269–Cases with procedure code 02PA3QZ (Removal of implantable heart assist system from heart, percutaneous approach)	6	5	\$19,421
MS-DRG 269–Cases with procedure code 02PA3RS (Removal of biventricular short-term external heart assist system from heart, percutaneous approach)	0	0	0
MS-DRG 269–Cases with procedure code 02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach)	11	4	\$25,719
MS-DRG 269–Cases with procedure code 02PA4QZ (Removal of implantable heart assist system from heart, percutaneous endoscopic approach)	1	3	\$14,415
MS-DRG 269–Cases with procedure code 02PA4RS (Removal of biventricular short-term external heart assist system from heart, percutaneous endoscopic approach)	0	0	0
MS-DRG 269–Cases with procedure code 02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach)	0	0	0

As shown in this table, for MS-DRG 268, there were a total of 3,798 cases, with an average length of stay of 9.6 days and average costs of \$49,122. There were 16 cases reporting procedure code 02PA0QZ (Removal of implantable heart assist system from heart, open approach), with an average length of stay of 23.4 days and average costs of \$79,850. There were no cases that reported procedure codes 02PA0RS (Removal of biventricular short-term external heart assist system from heart, open approach),

02PA0RZ (Removal of short-term external heart assist system from heart, open approach), 02PA3RS (Removal of biventricular short-term external heart assist system from heart, percutaneous approach), 02PA4RS (Removal of biventricular short-term external heart assist system from heart, percutaneous endoscopic approach) or 02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach). There were 28 cases reporting procedure code 02PA3QZ (Removal of implantable heart assist system from heart, percutaneous approach), with an average length of stay of 10.5 days and average costs of \$31,797. There were 96 cases reporting procedure code 02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach), with an average length of stay of 12.4 days and average costs of \$51,469. There were 5 cases reporting procedure code 02PA4QZ (Removal of implantable heart assist system from heart, percutaneous endoscopic approach), with an average length of stay of 7.8 days and average costs of \$37,592. For MS-DRG 269, there were a total of 16,900 cases, with an average length of stay of 2.4 days and average costs of \$30,793. There were 10 cases reporting procedure code 02PA0QZ (Removal of implantable heart assist system from heart, open approach), with an average length of stay of 8 days and average costs of \$23,741. There were no cases reporting procedure codes 02PA0RS (Removal of biventricular short-term external heart assist system from heart, open approach), 02PA0RZ (Removal of short-term external heart assist system from heart, open approach), 02PA3RS (Removal of biventricular short-term external heart assist system from heart, percutaneous approach), 02PA4RS (Removal of biventricular short-term external heart assist system from heart, percutaneous endoscopic

approach) or 02PA4RZ (Removal of short-term external heart assist system from heart, percutaneous endoscopic approach). There were 6 cases reporting procedure code 02PA3QZ (Removal of implantable heart assist system from heart, percutaneous approach), with an average length of stay of 5 days and average costs of \$19,421. There were 11 cases reporting procedure code 02PA3RZ (Removal of short-term external heart assist system from heart, percutaneous approach), with an average length of stay of 4 days and average costs of \$25,719. There was 1 case reporting procedure code 02PA4QZ (Removal of implantable heart assist system from heart, percutaneous endoscopic approach), with an average length of stay of 3 days and average costs of \$14,415.

The data show that there are differences in the average length of stay and average costs for cases in MS-DRGs 268 and 269 according to the type of device (short-term external heart assist system or implantable heart assist system), and the approaches that were utilized (open, percutaneous, or percutaneous endoscopic). In the proposed rule, we stated that we agreed with the recommendation to maintain the structure of MS-DRGs 268 and 269 for FY 2019 and will continue to analyze the claims data for possible future updates. As such, we proposed to not make any changes to the structure of MS-DRGs 268 and 269 for FY 2019.

Comment: Commenters supported CMS' proposal to not make any changes to the structure of MS-DRGs 268 and 269 for FY 2019.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to maintain the structure of MS-DRGs 268 and 269 for FY 2019.

b. Brachytherapy

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20188), we received a request to create a new Pre-MDC MS-DRG for all procedures involving the CivaSheet<sup>®</sup> technology, an implantable, planar brachytherapy source designed to enable delivery of radiation to the site of the cancer tumor excision or debulking, while protecting neighboring tissue. The requestor stated that physicians have used the CivaSheet<sup>®</sup> technology for a number of indications, such as colorectal, gynecological, head and neck, soft tissue sarcomas and pancreatic cancer. The requestor noted that potential uses also include nonsmall-cell lung cancer, ocular melanoma, and atypical meningioma. Currently, procedures involving the CivaSheet<sup>®</sup> technology are reported using ICD-10-PCS Section D--Radiation Therapy codes, with the root operation “Brachytherapy.” These codes are non-O.R. codes and group to the MS-DRG to which the principal diagnosis is assigned.

In response to this request, we analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for cases representing patients who received treatment that reported low dose rate (LDR) brachytherapy procedure codes across all MS-DRGs. We referred readers to Table 6P.—ICD-10-CM and ICD-10-PCS Codes for Proposed MS-DRG Changes associated with the proposed rule, which is available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. A detailed list of these procedure codes was shown in Table 6P.1.associated with the proposed rule. Our findings are reflected in the following table. As we note below in response to comments, there were errors in the

table included in the proposed rule (83 FR 20188) with regard to an identified MS-DRG and procedure code. However, there were no errors in the data findings reported. In the proposed rule, we identified claims data for MS-DRG 129 with procedure code D710BBZ (Low dose rate (LDR) brachytherapy of bone marrow using Palladium-103 (Pd-103)). That entry was an inadvertent error. The correct MS-DRG, that is, MS-DRG 054, and procedure code, that is, D010BBZ, are reflected in the table that follows. In addition, in the proposed rule we inadvertently identified MS-DRG 724 with procedure code DV10BBZ (Low dose rate (LDR) brachytherapy of prostate using Palladium 103 (Pd-103)). Upon review, this case was actually reported with MS-DRG 189. The data findings identified for each of these 4 cases are correctly reflected in the table that follows.

<b>Cases Reporting Low Dose Rate (LDR) Brachytherapy Procedure Codes Across All MS-DRGs</b>			
<b>ICD-10-PCS Procedures</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 054 (Nervous System Neoplasms with CC)--Cases with procedure code D010BBZ (Low dose rate (LDR) brachytherapy of brain using Palladium-103 (Pd-103))	1	7	\$10,357
MS-DRG 189 (Pulmonary Edema and Respiratory Failure)--Cases with procedure code DV10BBZ (Low dose rate (LDR) brachytherapy of prostate using Palladium-103 (Pd-103))	1	7	\$32,298
MS-DRG 129 (Major Head and Neck Procedures with CC/MCC or Major Device)--Cases with procedure code DW11BBZ (Low dose rate (LDR) brachytherapy of head and neck using Palladium-103 (Pd-103))	1	3	\$42,565
MS-DRG 330 (Major Small and Large Bowel Procedures with CC)--Cases with procedure code DW16BBZ (Low dose rate (LDR) brachytherapy of pelvic region using Palladium-103 (Pd-103))	1	8	\$74,190

As shown in the immediately preceding table, we identified 4 cases reporting one of these LDR brachytherapy procedure codes across all MS-DRGs, with an average length of stay of 6.3 days and average costs of \$39,853. In the proposed rule, we stated that we believe that creating a new Pre-MDC MS-DRG based on such a small number of cases could lead to distortion in the relative payment weights for the Pre-MDC MS-DRG. Having a larger number of clinically cohesive cases within the Pre-MDC MS-DRG provides greater stability for annual updates to the relative payment weights. Therefore, we did not propose to create a new Pre-MDC MS-DRG for procedures involving the CivaSheet<sup>®</sup> technology for FY 2019.

Comment: Some commenters supported CMS' proposal not to create a new MS-DRG for assignment of procedures involving the CivaSheet<sup>®</sup> technology. Several commenters, including the manufacturer of the CivaSheet<sup>®</sup> technology, disagreed with CMS' proposal, and stated that the current payment for cases involving the CivaSheet<sup>®</sup> technology is inadequate and does not currently allow widespread adoption and use of the technology. One commenter noted that its contractor also identified four cases in the proposed rule, but raised some concerns regarding the procedure codes and costs associated with the cases identified in the proposed rule. Other commenters described the clinical benefits and potential cost-savings associated with the CivaSheet<sup>®</sup> technology, and requested that CMS reconsider its proposal to not create a new Pre- MDC MS-DRG for the assignment of cases involving the use of this technology. The commenters stated that they understood CMS' concern about the lack of volume, but indicated that the lack

of adequate payment for procedures involving the CivaSheet<sup>®</sup> technology does not allow more widespread use. The manufacturer requested that, if CMS finalizes its proposal not to create a new MS-DRG for assignment of cases involving the CivaSheet<sup>®</sup> technology, CMS consider other payment mechanisms by which to ensure adequate payment for hospitals providing this service.

Response: We appreciate the commenters' support and input. With respect to the commenters who disagreed with our proposal, we reiterate that our analysis of the claims data and our clinical advisors did not support the creation of a new MS-DRG based on the very small number of cases identified. As we noted in the proposed rule, only four cases were identified. The MS-DRGs are a classification system intended to group together those diagnoses and procedures with similar clinical characteristics and utilization of resources. As we discussed in the proposed rule, basing a new MS-DRG on such a small number of cases could lead to distortions in the relative payment weights for the MS-DRG because several expensive cases could impact the overall relative payment weight. Having larger clinical cohesive groups within an MS-DRG provides greater stability for annual updates to the relative payment weights.

We agree with the commenter that there were some inadvertent errors in the table included in the proposed rule in reference to certain procedure codes and MS-DRGs; the table in this final rule above now correctly reflects the procedure codes and MS-DRGs reflected in the FY 2017 MedPAR file (as of the September 2017 update). We note that because our proposal was based on the small number of cases, and not the nature of those cases, these errors had no bearing on our proposal or our decision to finalize this

proposal. We acknowledge the commenters' concerns about the adequacy of payment for these low volume services. Therefore, as part of our ongoing, comprehensive analysis of the MS-DRGs under ICD-10, we will continue to explore mechanisms through which to address rare diseases and low volume DRGs.

After consideration of the public comments we received, we are finalizing our proposal to maintain the current MS-DRG structure for procedures involving the CivaSheet<sup>®</sup> technology for FY 2019.

c. Laryngectomy

The logic for case assignment to Pre-MDC MS-DRGs 11, 12, and 13 (Tracheostomy for Face, Mouth and Neck Diagnoses with MCC, with CC, and without CC/MCC, respectively) as displayed in the ICD-10 MS-DRG Version 35 Definitions Manual, which is available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>, is comprised of a list of procedure codes for laryngectomies, a list of procedure codes for tracheostomies, and a list of diagnosis codes for conditions involving the face, mouth, and neck. The procedure codes for laryngectomies are listed separately and are reported differently from the procedure codes listed for tracheostomies. The procedure codes listed for tracheostomies must be reported with a diagnosis code involving the face, mouth, or neck as a principal diagnosis to satisfy the logic for assignment to Pre-MDC MS-DRG 11, 12, or 13. Alternatively, any principal diagnosis code reported with a procedure code from

the list of procedure codes for laryngectomies will satisfy the logic for assignment to Pre-MDC MS-DRG 11, 12, or 13.

To improve the manner in which the logic for assignment is displayed in the ICD-10 MS-DRG Definitions Manual and to clarify how it is applied for grouping purposes, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20188), we proposed to reorder the lists of the diagnosis and procedure codes. The list of principal diagnosis codes for face, mouth, and neck would be sequenced first, followed by the list of the tracheostomy procedure codes and, lastly, the list of laryngectomy procedure codes.

We also proposed to revise the titles of Pre-MDC MS-DRGs 11, 12, and 13 from “Tracheostomy for Face, Mouth and Neck Diagnoses with MCC, with CC and without CC/MCC, respectively” to “Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy with MCC”, “Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy with CC”, and “Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy without CC/MCC”, respectively, to reflect that laryngectomy procedures may also be assigned to these MS-DRGs.

Comment: Commenters supported CMS’ proposal to reorder the lists of diagnoses and procedure codes for Pre-MDC MS-DRGs 11, 12 and 13 in the ICD-10 MS-DRG Definitions Manual to clarify the GROUPER logic. The commenters stated that the proposal was reasonable given the ICD-10-CM diagnosis codes, the ICD-10-PCS procedure codes, and the information provided. Commenters also supported the proposal to revise the titles for Pre-MDC MS-DRGs 11, 12 and 13.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing our proposal to reorder the lists of diagnoses and procedure codes for Pre-MDC MS-DRGs 11, 12, and 13 in the ICD-10 MS-DRG Definitions Manual Version 36. We also are finalizing our proposal to revise the titles for Pre-MDC MS-DRGs 11, 12, and 13 as follows for the ICD-10 MS-DRGs Version 36, effective October 1, 2018:

- MS-DRG 11 (Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy with MCC);
- MS-DRG 12 (Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy with CC); and
- MS-DRG 13 (Tracheostomy for Face, Mouth and Neck Diagnoses or Laryngectomy without CC/MCC).

d. Chimeric Antigen Receptor (CAR) T-Cell Therapy

Chimeric Antigen Receptor (CAR) T-cell therapy is a cell-based gene therapy in which T-cells are genetically engineered to express a chimeric antigen receptor that will bind to a certain protein on a patient's cancerous cells. The CAR T-cells are then administered to the patient to attack certain cancerous cells and the individual is observed for potential serious side effects that would require medical intervention.

Two CAR T-cell therapies received FDA approval in 2017. KYMRIAH<sup>®</sup> (manufactured by Novartis Pharmaceuticals Corporation) was approved for the use in the treatment of patients up to 25 years of age with B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse. In May 2018, KYMRIAH received FDA approval for a second indication, treatment of adult patients with relapsed

or refractory large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma (DLBCL), high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma. YESCARTA<sup>®</sup> (manufactured by Kite Pharma, Inc.) was approved for use in the treatment of adult patients with relapsed or refractory large B-cell lymphoma and who have not responded to or who have relapsed after at least two other kinds of treatment.

Procedures involving the CAR T-cell therapies are currently identified with ICD-10-PCS procedure codes XW033C3 (Introduction of engineered autologous chimeric antigen receptor t-cell immunotherapy into peripheral vein, percutaneous approach, new technology group 3) and XW043C3 (Introduction of engineered autologous chimeric antigen receptor t-cell immunotherapy into central vein, percutaneous approach, new technology group 3), which both became effective October 1, 2017. Procedures described by these two ICD-10-PCS procedure codes are designated as non-O.R. procedures that have no impact on MS-DRG assignment.

As we discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20189), we have received many inquiries from the public regarding payment of CAR T-cell therapy under the IPPS. Suggestions for the MS-DRG assignment for FY 2019 ranged from assigning ICD-10-PCS procedure codes XW033C3 and XW043C3 to an existing MS-DRG to the creation of a new MS-DRG for CAR T-cell therapy. In the context of the recommendation to create a new MS-DRG for FY 2019, we also received suggestions that payment should be established in a way that promotes comparability between the inpatient setting and outpatient setting.

As part of our review of these suggestions, we examined the existing MS-DRGs to identify the MS-DRGs that represent cases most clinically similar to those cases in which the CAR T-cell therapy procedures would be reported. The CAR T-cell procedures involve a type of autologous immunotherapy in which the patient's cells are genetically transformed and then returned to that patient after the patient undergoes cell depleting chemotherapy. Our clinical advisors believe that patients receiving treatment utilizing CAR T-cell therapy procedures would have similar clinical characteristics and comorbidities to those seen in cases representing patients receiving treatment for other hematologic cancers who are treated with autologous bone marrow transplant therapy that are currently assigned to MS-DRG 016 (Autologous Bone Marrow Transplant with CC/MCC). Therefore, after consideration of the inquiries received as to how the IPPS can appropriately group cases reporting the use of CAR T-cell therapy, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20189), we proposed to assign ICD-10-PCS procedure codes XW033C3 and XW043C3 to Pre-MDC MS-DRG 016 for FY 2019. In addition, we proposed to revise the title of MS-DRG 016 from "Autologous Bone Marrow Transplant with CC/MCC" to "Autologous Bone Marrow Transplant with CC/MCC or T-cell Immunotherapy."

However, we noted in the proposed rule that, as discussed in greater detail in section II.H.5.a. of the preamble of the proposed rule and this final rule, the manufacturer of KYMRIAHA and the manufacturer of YESCARTA submitted applications for new technology add-on payments for FY 2019. We stated that we also recognize that many members of the public have noted that the combination of the new technology add-on

payment applications, the extremely high-cost of these CAR T-cell therapies, and the potential for volume increases over time present unique challenges with respect to the MS-DRG assignment for procedures involving the utilization of CAR T-cell therapies and cases representing patients receiving treatment involving CAR T-cell therapies. We stated in the proposed rule that we believed that, in the context of these pending new technology add-on payment applications, there may also be merit in the alternative suggestion we received to create a new MS-DRG for procedures involving the utilization of CAR T-cell therapies and cases representing patients receiving treatment involving CAR T-cell therapy to which we could assign ICD-10-PCS procedure codes XW033C3 and XW043C3, effective for discharges occurring in FY 2019. We stated that, as noted in section II.H.5.a. of the preamble of the proposed rule, if a new MS-DRG were to be created then consistent with section 1886(d)(5)(K)(ix) of the Act there may no longer be a need for a new technology add-on payment under section 1886(d)(5)(K)(ii)(III) of the Act.

We invited public comments on our proposed approach of assigning ICD-10-PCS procedure codes XW033C3 and XW043C3 to Pre-MDC MS-DRG 016 for FY 2019. We also invited public comments on alternative approaches, including in the context of the pending KYMRIA and YESCARTA new technology add-on payment applications, and the most appropriate way to establish payment for FY 2019 under any alternative approaches. We indicated that such payment alternatives may include using a CCR of 1.0 for charges associated with ICD-10-PCS procedure codes XW033C3 and XW043C3, given that many public inquirers believed that hospitals would be unlikely to set charges

different from the costs for KYMRIA and YESCARTA CAR T-cell therapies, as discussed further in section II.A.4.g.2. of the Addendum of the proposed rule and this final rule. We further stated that these payment alternatives, including payment under any potential new MS-DRG, also could take into account an appropriate portion of the average sales price (ASP) for these drugs, including in the context of the pending new technology add-on payment applications.

We invited comments on how these payment alternatives would affect access to care, as well as how they affect incentives to encourage lower drug prices, which is a high priority for this Administration. In addition, we stated that we are considering approaches and authorities to encourage value-based care and lower drug prices. We solicited comments on how the payment methodology alternatives may intersect and affect future participation in any such alternative approaches.

We noted that, as stated in section II.F.1.b. of the preamble of the proposed rule, we described the criteria used to establish new MS-DRGs. In particular, we consider whether the resource consumption and clinical characteristics of the patients with a given set of conditions are significantly different than the remaining patients in the MS-DRG. We evaluate patient care costs using average costs and lengths of stay and rely on the judgment of our clinical advisors to decide whether patients are clinically distinct or similar to other patients in the MS-DRG. In evaluating resource costs, we consider both the absolute and percentage differences in average costs between the cases we select for review and the remainder of cases in the MS-DRG. We also consider whether observed average differences are consistent across patients or attributable to cases that were

extreme in terms of costs or length of stay, or both. Further, we consider the number of patients who will have a given set of characteristics and generally prefer not to create a new MS-DRG unless it would include a substantial number of cases. Based on the principles typically used to establish a new MS-DRG, we solicited comments on how the administration of the CAR T-cell therapies and associated services meet the criteria for the creation of a new MS-DRG. Also, section 1886(d)(4)(C)(iii) of the Act specifies that, beginning in FY 1991, the annual DRG reclassification and recalibration of the relative weights must be made in a manner that ensures that aggregate payments to hospitals are not affected. Given that a new MS-DRG must be established in a budget neutral manner, we stated that we are concerned with the redistributive effects away from core hospital services over time toward specialized hospitals and how that may affect payment for these core services. Therefore, we solicited public comments on our concerns with the payment alternatives that we were considering for CAR T-cell therapies.

Comment: Many commenters stated that the existing payment mechanisms under the IPPS do not allow for accurate payment of CAR T-cell therapy due its unprecedented high cost. Commenters also asserted structural insufficiencies in the new technology add-on payments for the drug therapy, such as the maximum add-on payment of 50 percent; the inapplicability of the usual cost to charge ratios used in ratesetting and payment, including those used in determining new technology add-on payments, outlier payments, and payments to IPPS-excluded cancer hospitals; and a lack of sufficient historical data and experience related to a therapy with a cost of this magnitude. In addition, commenters stated that payment for CAR T-cell therapy should avoid

inappropriate financial incentives for care to be provided in an outpatient instead of an inpatient setting. Many commenters requested a permanent and long-term solution to ensure accurate payment for CAR T-cell therapy while concurrently ensuring any redistributive payment effects within the IPPS are limited.

Some commenters recommended that, until a more permanent solution is developed, CMS finalize the proposed assignment of CAR T-cell therapy to MS-DRG 016, approve the NTAP application for CAR T-cell therapy, and/or allow for a CCR of 1.0 for CAR T-cell therapy. However, some commenters disagreed with CMS' proposed assignment of CAR T-cell therapy to MS-DRG 016 and requested a new separate MS-DRG. These commenters disagreed that patients receiving CAR T-cell therapy are sufficiently clinically similar to patients receiving autologous bone marrow transplants. Reasons cited by these commenters included differences in lengths of stay, the level and predictability of associated toxicity, and the overall disease burden. Some of these commenters suggested creating a new separate MS-DRG for CAR T-cell therapy and developing the FY 2019 weight for this MS-DRG not based only on historical claims data but also including alternative data on the cost of CAR T-cell therapy drugs, such as average sales price (ASP) data. Some commenters pointed to the establishment of a separate DRG for drug eluting stents under the IPPS as a possible payment model for CAR T-cell therapy.

Other commenters did not support the creation of a new separate MS-DRG for CAR T-cell therapy. Reasons cited by these commenters included the relative newness of the therapy, the limited number of providers delivering these treatments, the low

volume of patients, redistributive effects, and the lack of long term data surrounding length of stay, treatment complexities, and costs. These commenters urged CMS to collect more comprehensive clinical and cost data before considering assignment of a new MS-DRG to these therapies.

Some commenters requested that CMS carve out the cost of CAR T-cell therapy from the IPPS and pay for it on a pass-through basis reflecting the cost of the therapy to the hospital and indicated that this was the approach taken by some state Medicaid programs. These commenters believed that payment on a pass-through basis, for inpatient and/or outpatient care, provides the most accurate payment while minimizing inappropriate payment incentives across the inpatient and outpatient setting.

Commenters also made technical and operational suggestions to CMS if we were to adopt changes to our existing payment mechanisms in the final rule as they apply to CAR T-cell therapy, including how a CCR of 1.0 would be operationalized, or how CMS would collect data on the cost of CAR T-cell therapy for pass-through and other purposes.

Response: Building on President Trump's *Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs*, the CMS Center for Medicare and Medicaid Innovation (Innovation Center) is soliciting public comment in the CY 2019 OPPI/ASC proposed rule on key design considerations for developing a potential model that would test private market strategies and introduce competition to improve quality of care for beneficiaries, while reducing both Medicare expenditures and beneficiaries' out of pocket spending.

CMS sought similar feedback in a previous solicitation of comments<sup>4</sup>, and, most recently, in the President's *Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs*.<sup>5</sup>

Given the relative newness of CAR T-cell therapy, the potential model, including the reasons underlying our consideration of a potential model described in greater detail in the CY 2019 OPPI/ASC proposed rule, and our request for feedback on this model approach, we believe it would be premature to adopt changes to our existing payment mechanisms, either under the IPPS or for IPPS-excluded cancer hospitals, specifically for CAR T-cell therapy. Therefore, we disagree with commenters who have requested such changes under the IPPS for FY 2019, including, but not limited to, the creation of a pass-through payment; structural changes in new technology add-on payments for the drug therapy; changes in the usual cost-to-charge ratios (CCRs) used in ratesetting and payment, including those used in determining new technology add-on payments, outlier payments, and payments to IPPS excluded cancer hospitals; and the creation of a new MS-DRG specifically for CAR T-cell therapy prior to gaining more experience with the therapy.

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<sup>4</sup> CMS included a solicitation of comments on the Competitive Acquisition Program (CAP) for Part B Drugs and Biologicals (81 FR 13247) in a proposed rule, on March 11, 2016, entitled "Medicare Program; Part B Drug Payment Model" (81 FR 13230). The solicitation of comments sought to help CMS determine if there was sufficient interest in the CAP program, and to gather public input if we were to consider developing and testing a future model that would be at least partly based on the authority for the CAP under section 1847B of the Act. The March 11, 2016 proposed rule was withdrawn on October 4, 2017 (82 FR 46182) to ensure agency flexibility in reexamining important issues related to the proposed payment model and exploring new options and alternatives with stakeholders as CMS develops potential payment models that support innovative approaches to improve quality, accessibility, and affordability, reduce Medicare program expenditures, and empower patients and doctors to make decisions about their health care.

<sup>5</sup> President Donald J. Trump's *Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs*, May 11, 2018. Available at: <https://www.whitehouse.gov/briefings-statements/president-donald-j-trumps-blueprint-lower-drug-prices/>.

We agree with commenters who recommended that we finalize the proposed assignment of CAR-T therapy to MS-DRG 016 rather than consider the creation of a new MS-DRG for these therapies, given the relative newness of the therapy, the limited number of providers delivering these treatments, the low volume of patients, redistributive effects, and the lack of long-term data surrounding length of stay, treatment complexities, and costs. In addition to the potential model, we agree we should collect more comprehensive clinical and cost data before considering assignment of a new MS-DRG to these therapies.

In response to the commenters who indicated that MS-DRG 016 is a poor clinical match for CAR T-cell therapy patients and would prefer that we create a new MS-DRG for CAR-T cell therapy, we acknowledge that there are differences between the treatment approaches, but we continue to believe that MS-DRG 016 is the most appropriate match of the existing MS-DRGs, given similarities between CAR-T cell therapy and autologous bone marrow transplant in harvesting and infusion of patient cells as well as post-infusion monitoring for and management of potentially severe adverse effects. We reiterate that, in light of the potential model and our request for feedback on this approach, it would be premature to create a new MS-DRG specifically for CAR T-cell therapy. We will consider requests for alternative MS-DRG assignments and/or the creation of a new MS-DRG for CAR T-cell therapy after we review the public feedback on a potential model and as we gain further experience with CAR T-cell therapy and can better evaluate the commenters' concerns.

As described in more detail in section II.H. of the preamble of this final rule, we are approving new technology add-on payments for CAR T-cell therapy for FY 2019.

In response to commenters who made technical and operational suggestions if CMS were to adopt changes to its existing payment mechanisms in the final rule as they apply to CAR T-cell therapy, because we are not adopting such changes, we are not addressing those technical and operational comments at the current time but will consider them for future rulemaking as appropriate.

After consideration of the public comments we received, we are finalizing our proposed approach of assigning ICD-10-PCS procedure codes XW033C3 and XW043C3 to Pre-MDC MS-DRG 016 for FY 2019 and to revise the title of MS-DRG 016 from “Autologous Bone Marrow Transplant with CC/MCC” to “Autologous Bone Marrow Transplant with CC/MCC or T-cell Immunotherapy.”

### 3. MDC 1 (Diseases and Disorders of the Nervous System)

#### a. Epilepsy with Neurostimulator

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38015 through 38019), based on a request we received and our review of the claims data, the advice of our clinical advisors, and consideration of public comments, we finalized our proposal to reassign all cases reporting a principal diagnosis of epilepsy and one of the following ICD-10-PCS code combinations, which capture cases involving neurostimulator generators inserted into the skull (including cases involving the use of the RNS<sup>®</sup> neurostimulator), to retitled MS-DRG 023 (Craniotomy with Major Device Implant or Acute Complex Central

Nervous System (CNS) Principal Diagnosis (PDX) with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator), even if there is no MCC reported:

- 0NH00NZ (Insertion of neurostimulator generator into skull, open approach), in combination with 00H00MZ (Insertion of neurostimulator lead into brain, open approach);
- 0NH00NZ (Insertion of neurostimulator generator into skull, open approach), in combination with 00H03MZ (Insertion of neurostimulator lead into brain, percutaneous approach); and
- 0NH00NZ (Insertion of neurostimulator generator into skull, open approach), in combination with 00H04MZ (Insertion of neurostimulator lead into brain, percutaneous endoscopic approach).

The finalized listing of epilepsy diagnosis codes (82 FR 38018 through 38019) contained codes provided by the requestor (82 FR 38016), in addition to diagnosis codes organized in subcategories G40.A- and G40.B- as recommended by a commenter in response to the proposed rule (82 FR 38018) because the diagnosis codes organized in these subcategories also are representative of diagnoses of epilepsy.

For FY 2019, we received a request to include two additional diagnosis codes organized in subcategory G40.1- in the listing of epilepsy diagnosis codes for cases assigned to MS-DRG 023 because these diagnosis codes also represent diagnoses of epilepsy. The two additional codes identified by the requestor are:

- G40.109 (Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, without status epilepticus); and

- G40.111 (Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable, with status epilepticus).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20190), we stated that we agreed with the requestor that diagnosis codes G40.109 and G40.111 also are representative of epilepsy diagnoses and should be added to the listing of epilepsy diagnosis codes for cases assigned to MS-DRG 023 because they also capture a type of epilepsy. Our clinical advisors reviewed this issue and agreed that adding the two additional epilepsy diagnosis codes is appropriate. Therefore, we proposed to add ICD-10-CM diagnosis codes G40.109 and G40.111 to the listing of epilepsy diagnosis codes for cases assigned to MS-DRG 023, effective October 1, 2018.

Comment: Commenters agreed with CMS' proposal to add ICD-10-CM diagnosis codes G40.109 and G40.111 to the list of epilepsy diagnosis codes for assignment to MS-DRG 023. The commenters stated that the proposal was reasonable, given the ICD-10-CM diagnosis codes and the information provided.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add ICD-10-CM diagnosis codes G40.109 and G40.111 to the list of epilepsy diagnosis codes for assignment to MS-DRG 023 in the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

#### b. Neurological Conditions with Mechanical Ventilation

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20190), we received two separate, but related requests to create new MS-DRGs for cases that identify patients who have been diagnosed with neurological conditions classified under MDC 1 (Diseases and Disorders of the Nervous System) and who require mechanical ventilation with and without a thrombolytic and in the absence of an O.R. procedure. The requestors suggested that CMS consider when mechanical ventilation is reported with a neurological condition for the ICD-10 MS-DRG GROUPER assignment logic, similar to the current logic for MS-DRGs 207 and 208 (Respiratory System Diagnosis with Ventilator Support > 96 Hours and <= 96 Hours, respectively) under MDC 4 (Diseases and Disorders of the Respiratory System), which consider respiratory conditions that require mechanical ventilation and are assigned a higher relative weight.

The requestors stated that patients with a principal diagnosis of respiratory failure requiring mechanical ventilation are currently assigned to MS-DRG 207 (Respiratory System Diagnoses with Ventilator Support > 96 Hours), which has a relative weight of 5.4845, and to MS-DRG 208 (Respiratory System Diagnoses with Ventilator Support <= 96 Hours), which has a relative weight of 2.3678. The requestors also stated that patients with a principal diagnosis of ischemic cerebral infarction who received a thrombolytic agent during the hospital stay and did not undergo an O.R. procedure are assigned to MS-DRGs 061, 062, and 063 (Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent with MCC, with CC, and without CC/MCC, respectively) under MDC 1, while patients

with a principal diagnosis of intracranial hemorrhage or ischemic cerebral infarction who did not receive a thrombolytic agent during the hospital stay and did not undergo an O.R. procedure are assigned to MS-DRGs 064, 065 and 66 (Intracranial Hemorrhage or Cerebral Infarction with MCC, with CC or TPA in 24 Hours, and without CC/MCC, respectively) under MDC 1.

The requestors provided the current FY 2018 relative weights for these MS-DRGs as shown in the following table.

<b>MS-DRG</b>	<b>MS-DRG Title</b>	<b>Relative Weight</b>
MS-DRG 061	Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent with MCC	2.7979
MS-DRG 062	Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent with CC	1.9321
MS-DRG 063	Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent without CC/ MCC	1.6169
MS-DRG 064	Intracranial Hemorrhage or Cerebral Infarction with MCC	1.7685
MS-DRG 065	Intracranial Hemorrhage or Cerebral Infarction with CC or TPA in 24 hours	1.0311
MS-DRG 066	Intracranial Hemorrhage or Cerebral Infarction with MCC	.7466

The requestors stated that although the ICD-10-CM Official Guidelines for Coding and Reporting allow sequencing of acute respiratory failure as the principal diagnosis when it is jointly responsible (with an acute neurologic event) for admission, which would result in assignment to MS-DRGs 207 or 208 when the patient requires mechanical ventilation, it would not be appropriate to sequence acute respiratory failure as the principal diagnosis when it is secondary to intracranial hemorrhage or ischemic cerebral infarction.

The requestors also stated that reporting for other purposes, such as quality measures, clinical trials, and Joint Commission and State certification or survey cases, is based on the principal diagnosis, and it is important, from a quality of care perspective, that the intracranial hemorrhage or cerebral infarction codes continue to be sequenced as principal diagnosis. The requestors believed that cases of patients who present with cerebral infarction or cerebral hemorrhage and acute respiratory failure are currently in conflict for principal diagnosis sequencing because the cerebral infarction or cerebral hemorrhage code is needed as the principal diagnosis for quality reporting and other purposes. However, acute respiratory failure is needed as the principal diagnosis for purposes of appropriate payment under the MS-DRGs.

The requestors stated that by creating new MS-DRGs for neurological conditions with mechanical ventilation, those patients who require mechanical ventilation for airway protection on admission and those patients who develop acute respiratory failure requiring mechanical ventilation after admission can be grouped to MS-DRGs that provide appropriate payment for the mechanical ventilation resources. The requestors suggested two new MS-DRGs, citing as support that new MS-DRGs were created for patients with sepsis requiring mechanical ventilation greater than and less than 96 hours.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20191) and earlier in this section, the requests we received were separate, but related requests. The first request was to specifically identify patients presenting with intracranial hemorrhage

or cerebral infarction with mechanical ventilation and create two new MS-DRGs as follows:

- Suggested new MS-DRG XXX (Intracranial Hemorrhage or Cerebral Infarction with Mechanical Ventilation > 96 Hours); and
- Suggested new MS-DRG XXX (Intracranial Hemorrhage or Cerebral Infarction with Mechanical Ventilation <= 96 Hours).

The second request was to consider *any* principal diagnosis under the current GROUPER logic for MDC 1 with mechanical ventilation and create two new MS-DRGs as follows:

- Suggested New MS-DRG XXX (Neurological System Diagnosis with Mechanical Ventilation 96+ Hours); and
- Suggested New MS-DRG XXX (Neurological System Diagnosis with Mechanical Ventilation ≤ 96 Hours).

Both requesters suggested that CMS use the three ICD-10-PCS codes identifying mechanical ventilation to assign cases to the respective suggested new MS-DRGs. The three ICD-10-PCS codes are shown in the following table.

ICD-10-PCS Code	Code Description
5A1935Z	Respiratory ventilation, less than 96 consecutive hours
5A1945Z	Respiratory ventilation, 24-96 consecutive hours
5A1955Z	Respiratory ventilation, greater than 96 consecutive hours

Below we discuss the different aspects of each request in more detail.

The first request involved two aspects: (1) analyzing patients diagnosed with cerebral infarction and required mechanical ventilation who received a thrombolytic (for example, TPA) and did not undergo an O.R. procedure; and (2) analyzing patients diagnosed with intracranial hemorrhage or ischemic cerebral infarction and required mechanical ventilation who did not receive a thrombolytic (for example, TPA) during the current episode of care and did not undergo an O.R. procedure.

For the first subset of patients, we analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for MS-DRGs 061, 062, and 063 because cases that are assigned to these MS-DRGs specifically identify patients who were diagnosed with a cerebral infarction and received a thrombolytic. The 90 ICD-10-CM diagnosis codes that specify a cerebral infarction and were included in our analysis are listed in Table 6P.1a associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>).

The ICD-10-PCS procedure codes displayed in the following table describe use of a thrombolytic agent.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
3E03017	Introduction of other thrombolytic into peripheral vein, open approach
3E03317	Introduction of other thrombolytic into peripheral vein, percutaneous approach
3E04017	Introduction of other thrombolytic into central vein, open approach
3E04317	Introduction of other thrombolytic into central vein, percutaneous approach
3E05017	Introduction of other thrombolytic into peripheral artery, open approach
3E05317	Introduction of other thrombolytic into peripheral artery, percutaneous approach
3E06017	Introduction of other thrombolytic into central artery, open approach

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
3E06317	Introduction of other thrombolytic into central artery, percutaneous approach
3E08017	Introduction of other thrombolytic into heart, open approach
3E08317	Introduction of other thrombolytic into heart, percutaneous approach

We examined claims data in MS-DRGs 061, 062, and 063 and identified cases that reported mechanical ventilation of any duration with a principal diagnosis of cerebral infarction where a thrombolytic agent was administered and the patient did not undergo an O.R. procedure. Our findings are shown in the following table.

<b>Cerebral Infarction with Thrombolytic and MV</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 061--All cases	5,192	6.4	\$20,097
MS-DRG 061--Cases with principal diagnosis of cerebral infarction and mechanical ventilation > 96 hours	166	12.8	\$41,691
MS-DRG 061--Cases with principal diagnosis of cerebral infarction and mechanical ventilation = 24-96 hours	378	7.5	\$26,368
MS-DRG 061--Cases with principal diagnosis of cerebral infarction and mechanical ventilation < 24 hours	214	4.9	\$19,795
MS-DRG 062--All cases	9,730	3.9	\$13,865
MS-DRG 062--Cases with principal diagnosis of cerebral infarction and mechanical ventilation > 96 hours	0	0.0	\$0
MS-DRG 062--Cases with principal diagnosis of cerebral infarction and mechanical ventilation= 24-96 hours	10	5.3	\$19,817
MS-DRG 062--Cases with principal diagnosis of cerebral infarction and mechanical ventilation < 24 hours	23	3.8	\$14,026
MS-DRG 063--All cases	1,984	2.7	\$11,771
MS-DRG 063--Cases with principal diagnosis of cerebral infarction and mechanical	0	0.0	\$0

<b>Cerebral Infarction with Thrombolytic and MV</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
ventilation > 96 hours			
MS-DRG 063--Cases with principal diagnosis of cerebral infarction and mechanical ventilation = 24-96 hours	3	2.7	\$14,588
MS-DRG 063--Cases with principal diagnosis of cerebral infarction and mechanical ventilation < 24 hours	5	2.0	\$11,195

As shown in this table, there were a total of 5,192 cases in MS-DRG 061 with an average length of stay of 6.4 days and average costs of \$20,097. There were a total of 758 cases reporting the use of mechanical ventilation in MS-DRG 061 with an average length of stay ranging from 4.9 days to 12.8 days and average costs ranging from \$19,795 to \$41,691. For MS-DRG 062, there were a total of 9,730 cases with an average length of stay of 3.9 days and average costs of \$13,865. There were a total of 33 cases reporting the use of mechanical ventilation in MS-DRG 062 with an average length of stay ranging from 3.8 days to 5.3 days and average costs ranging from \$14,026 to \$19,817. For MS-DRG 063, there were a total of 1,984 cases with an average length of stay of 2.7 days and average costs of \$11,771. There were a total of 8 cases reporting the use of mechanical ventilation in MS-DRG 063 with an average length of stay ranging from 2.0 days to 2.7 days and average costs ranging from \$11,195 to \$14,588.

We then compared the total number of cases in MS-DRGs 061, 062, and 063 specifically reporting mechanical ventilation > 96 hours with a principal diagnosis of cerebral infarction where a thrombolytic agent was administered and the patient did not undergo an O.R. procedure against the total number of cases reporting mechanical

ventilation  $\leq$  96 hours with a principal diagnosis of cerebral infarction where a thrombolytic agent was administered and the patient did not undergo an O.R. procedure.

Our findings are shown in the following table.

<b>Cerebral Infarction with Thrombolytic and MV</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 061--All cases	5,192	6.4	\$20,097
MS-DRG 061--Cases with principal diagnosis of cerebral infarction and mechanical ventilation > 96 hours	166	12.8	\$41,691
MS-DRG 061--Cases with principal diagnosis of cerebral infarction and mechanical ventilation $\leq$ 96 hours	594	6.5	\$23,780
MS-DRG 062--All cases	9,730	3.9	\$13,865
MS-DRG 062--Cases with principal diagnosis of cerebral infarction and mechanical ventilation > 96 hours	0	0.0	\$0
MS-DRG 062--Cases with principal diagnosis of cerebral infarction and mechanical ventilation $\leq$ 96 hours	34	4.2	\$15,558
MS-DRG 063--All cases	1,984	2.7	\$11,771
MS-DRG 063--Cases with principal diagnosis of cerebral infarction and mechanical ventilation > 96 hours	0	0.0	\$0
MS-DRG 063--Cases with principal diagnosis of cerebral infarction and mechanical ventilation $\leq$ 96 hours	8	2.3	\$12,467

As shown in this table, the total number of cases reported in MS-DRG 061 was 5,192, with an average length of stay of 6.4 days and average costs of \$20,097. There were 166 cases that reported mechanical ventilation > 96 hours, with an average length of stay of 12.8 days and average costs of \$41,691. There were 594 cases that reported mechanical ventilation  $\leq$  96 hours, with an average length of stay of 6.5 days and average costs of \$23,780.

The total number of cases reported in MS-DRG 062 was 9,730, with an average length of stay of 3.9 days and average costs of \$13,865. There were no cases identified in MS-DRG 062 where mechanical ventilation > 96 hours was reported. However, there were 34 cases that reported mechanical ventilation <= 96 hours, with an average length of stay of 4.2 days and average costs of \$15,558.

The total number of cases reported in MS-DRG 63 was 1,984 with an average length of stay of 2.7 days and average costs of \$11,771. There were no cases identified in MS-DRG 063 where mechanical ventilation > 96 hours was reported. However, there were 8 cases that reported mechanical ventilation <= 96 hours, with an average length of stay of 2.3 days and average costs of \$12,467.

For the second subset of patients, we examined claims data for MS-DRGs 064, 065, and 066. We identified cases reporting mechanical ventilation of any duration with a principal diagnosis of cerebral infarction or intracranial hemorrhage where a thrombolytic agent was not administered during the current hospital stay and the patient did not undergo an O.R. procedure. The 33 ICD-10-CM diagnosis codes that specify an intracranial hemorrhage and were included in our analysis are listed in Table 6P.1b associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>).

We also used the list of 90 ICD-10-CM diagnosis codes that specify a cerebral infarction listed in Table 6P.1a associated with the proposed rule for our analysis. We noted that the GROUPER logic for case assignment to MS-DRG 065 includes that a

thrombolytic agent (for example, tPA) was administered within 24 hours of the current hospital stay. The ICD-10-CM diagnosis code that describes this scenario is Z92.82 (Status post administration of tPA (rtPA) in a different facility within the last 24 hours prior to admission to current facility). We did not review the cases reporting that diagnosis code for our analysis. Our findings are shown in the following table.

<b>Cerebral Infarction or Intracranial Hemorrhage with MV and without Thrombolytic</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 064--All cases	76,513	6.0	\$12,574
MS-DRG 064--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	2,153	13.4	\$38,262
MS-DRG 064--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation = 24-96 hours	4,843	6.6	\$18,119
MS-DRG 064--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation < 24 hours	4,001	3.1	\$8,675
MS-DRG 065--All cases	106,554	3.7	\$7,236
MS-DRG 065--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	22	10.2	\$20,759
MS-DRG 065--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation = 24-96 hours	127	4.2	\$12,688
MS-DRG 065--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation < 24 hours	301	2.1	\$6,145
MS-DRG 066--All cases	34,689	2.5	\$5,321

<b>Cerebral Infarction or Intracranial Hemorrhage with MV and without Thrombolytic</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 066--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	1	4.0	\$3,426
MS-DRG 066--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation = 24-96 hours	31	3.7	\$10,364
MS-DRG 066--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation < 24 hours	163	1.4	\$4,148

The total number of cases reported in MS-DRG 064 was 76,513, with an average length of stay of 6.0 days and average costs of \$12,574. There were a total of 10,997 cases reporting the use of mechanical ventilation in MS-DRG 064 with an average length of stay ranging from 3.1 days to 13.4 days and average costs ranging from \$8,675 to \$38,262. For MS-DRG 065, there were a total of 106,554 cases with an average length of stay of 3.7 days and average costs of \$7,236. There were a total of 450 cases reporting the use of mechanical ventilation in MS-DRG 065 with an average length of stay ranging from 2.1 days to 10.2 days and average costs ranging from \$6,145 to \$20,759. For MS-DRG 066, there were a total of 34,689 cases with an average length of stay of 2.5 days and average costs of \$5,321. There were a total of 195 cases reporting the use of mechanical ventilation in MS-DRG 066 with an average length of stay ranging from 1.4 days to 4.0 days and average costs ranging from \$3,426 to \$10,364.

We then compared the total number of cases in MS-DRGs 064, 065, and 066 specifically reporting mechanical ventilation > 96 hours with a principal diagnosis of cerebral infarction or intracranial hemorrhage where a thrombolytic agent was not administered and the patient did not undergo an O.R. procedure against the total number of cases reporting mechanical ventilation <= 96 hours with a principal diagnosis of cerebral infarction or intracranial hemorrhage where a thrombolytic agent was not administered and the patient did not undergo an O.R. procedure. Our findings are shown in the following table.

<b>Cerebral Infarction or Intracranial Hemorrhage with MV and without Thrombolytic</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 064--All cases	76,513	6.0	\$12,574
MS-DRG 064--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	2,153	13.4	\$38,262
MS-DRG 064--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation <= 96 hours	8,794	4.9	\$13,704
MS-DRG 065--All cases	106,554	3.7	\$7,236
MS-DRG 065--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	22	10.2	\$20,759
MS-DRG 065--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation <= 96 hours	428	2.7	\$8,086
MS-DRG 066--All cases	34,689	2.5	\$5,321
MS-DRG 066--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation > 96 hours	1	4.0	\$3,426
MS-DRG 066--Cases with principal diagnosis of cerebral infarction or intracranial hemorrhage and mechanical ventilation <= 96 hours	194	1.8	\$5,141

The total number of cases reported in MS-DRG 064 was 76,513, with an average length of stay of 6.0 days and average costs of \$12,574. There were 2,153 cases that reported mechanical ventilation > 96 hours, with an average length of stay of 13.4 days and average costs of \$38,262, and there were 8,794 cases that reported mechanical ventilation <= 96 hours, with an average length of stay of 4.9 days and average costs of \$13,704.

The total number of cases reported in MS-DRG 65 was 106,554, with an average length of stay of 3.7 days and average costs of \$7,236. There were 22 cases that reported mechanical ventilation > 96 hours, with an average length of stay of 10.2 days and average costs of \$20,759, and there were 428 cases that reported mechanical ventilation <= 96 hours, with an average length of stay of 2.7 days and average costs of \$8,086.

The total number of cases reported in MS-DRG 66 was 34,689, with an average length of stay of 2.5 days and average costs of \$5,321. There was one case that reported mechanical ventilation > 96 hours, with an average length of stay of 4.0 days and average costs of \$3,426, and there were 194 cases that reported mechanical ventilation <= 96 hours, with an average length of stay of 1.8 days and average costs of \$5,141.

We also analyzed claims data for MS-DRGs 207 and 208. As shown in the following table, there were a total of 19,471 cases found in MS-DRG 207 with an average length of stay of 13.8 days and average costs of \$38,124. For MS-DRG 208, there were a total of 55,802 cases found with an average length of stay of 6.7 days and average costs of \$17,439.

<b>Respiratory System Diagnosis with Ventilator Support</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 207--All cases	19,471	13.8	\$38,124
MS-DRG 208--All cases	55,802	6.7	\$17,439

We stated in the proposed rule that our analysis of claims data relating to the first request for MS-DRGs 061, 062, 063, 064, 065, and 066 and consultation with our clinical advisors do not support creating new MS-DRGs for cases that identify patients diagnosed with cerebral infarction or intracranial hemorrhage who require mechanical ventilation with or without a thrombolytic and in the absence of an O.R. procedure.

For the first subset of patients (in MS-DRGs 061, 062 and 063), our data findings for MS-DRG 061 demonstrate the 166 cases that reported mechanical ventilation > 96 hours had a longer average length of stay (12.8 days versus 6.4 days) and higher average costs (\$41,691 versus \$20,097) compared to all the cases in MS-DRG 061. However, there were no cases that reported mechanical ventilation > 96 hours for MS-DRG 062 or MS-DRG 063. For the 594 cases that reported mechanical ventilation <= 96 hours in MS-DRG 061, the data show that the average length of stay was consistent with the average length of stay of all of the cases in MS-DRG 061 (6.5 days versus 6.4 days) and the average costs were also consistent with the average costs of all of the cases in MS-DRG 061 (\$23,780 versus \$20,097). For the 34 cases that reported mechanical ventilation <= 96 hours in MS-DRG 062, the data show that the average length of stay was consistent with the average length of stay of all of the cases in MS-DRG 062 (4.2 days versus 3.9 days) and the average costs were also consistent with the average

costs of all of the cases in MS DRG 062 (\$15,558 versus \$13,865). Lastly, for the 8 cases that reported mechanical ventilation  $\leq$  96 hours in MS-DRG 063, the data show that the average length of stay was consistent with the average length of stay of all of the cases in MS-DRG 063 (2.3 days versus 2.7 days) and the average costs were also consistent with the average costs of all of the cases in MS DRG 063 (\$12,467 versus \$11,771).

For the second subset of patients (in MS-DRGs 064, 065 and 066), the data findings for the 2,153 cases that reported mechanical ventilation  $>96$  hours in MS-DRG 064 showed a longer average length of stay (13.4 days versus 6.0 days) and higher average costs (\$38,262 versus \$12,574) compared to all of the cases in MS-DRG 064. However, the 2,153 cases represent only 2.8 percent of all the cases in MS-DRG 064. For the 22 cases that reported mechanical ventilation  $> 96$  hours in MS-DRG 065, the data showed a longer average length of stay (10.2 days versus 3.7 days) and higher average costs (\$20,759 versus \$7,236) compared to all of the cases in MS-DRG 065. However, the 22 cases represent only 0.02 percent of all the cases in MS-DRG 065. For the one case that reported mechanical ventilation  $>96$  hours in MS-DRG 066, the data showed a longer average length of stay (4.0 days versus 2.5 days) and lower average costs (\$3,426 versus \$5,321) compared to all of the cases in MS-DRG 066. For the 8,794 cases that reported mechanical ventilation  $\leq$  96 hours in MS-DRG 064, the data showed that the average length of stay was shorter than the average length of stay for all of the cases in MS-DRG 064 (4.9 days versus 6.0 days) and the average costs were consistent with the average costs of all of the cases in MS-DRG 064 (\$13,704 versus \$12,574). For

the 428 cases that reported mechanical ventilation  $\leq 96$  hours in MS-DRG 065, the data showed that the average length of stay was shorter than the average length of stay for all of the cases in MS-DRG 065 (2.7 days versus 3.7 days) and the average costs were consistent with the average costs of all the cases in MS-DRG 065 (\$8,086 versus \$7,236). For the 194 cases that reported mechanical ventilation  $\leq 96$  hours in MS-DRG 066, the data showed that the average length of stay was shorter than the average length of stay for all of the cases in MS-DRG 066 (1.8 days versus 2.5 days) and the average costs were less than the average costs of all of the cases in MS-DRG 066 (\$5,141 versus \$5,321).

We stated in the proposed rule that, based on the analysis described above, the current MS-DRG assignment for the cases in MS-DRGs 061, 062, 063, 064, 065 and 066 that identify patients diagnosed with cerebral infarction or intracranial hemorrhage who require mechanical ventilation with or without a thrombolytic and in the absence of an O.R. procedure appears appropriate.

Our clinical advisors also noted that patients requiring mechanical ventilation (in the absence of an O.R. procedure) are known to be more resource intensive and it would not be practical to create new MS-DRGs specifically for this subset of patients diagnosed with an acute neurologic event, given the various indications for which mechanical ventilation may be utilized. We stated in the proposed rule that, if we were to create new MS-DRGs for patients diagnosed with an intracranial hemorrhage or cerebral infarction who require mechanical ventilation, it would not address all of the other patients who also utilize mechanical ventilation resources. It would also necessitate further extensive

analysis and evaluation for several other conditions that require mechanical ventilation across each of the 25 MDCs under the ICD-10 MS-DRGs.

To evaluate the frequency in which the use of mechanical ventilation is reported for different clinical scenarios, we examined claims data across each of the 25 MDCs to determine the number of cases reporting the use of mechanical ventilation > 96 hours.

Our findings are shown in the table below.

<b>Mechanical Ventilation &gt; 96 Hours Across All MDCs</b>			
<b>MDC</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
All cases with mechanical ventilation > 96 hours	127,626	18.4	\$61,056
MDC 1 (Diseases and Disorders of the Nervous System)--Cases with mechanical ventilation > 96 hours	13,668	18.3	\$61,234
MDC 2 (Disease and Disorders of the Eye)--Cases with mechanical ventilation > 96 hours	33	22.7	\$79,080
MDC 3 (Diseases and Disorders of the Ear, Nose, Mouth and Throat)--Cases with mechanical ventilation > 96 hours	602	20.3	\$62,625
MDC 4 (Diseases and Disorders of the Respiratory System)--Cases with mechanical ventilation > 96 hours	27,793	16.6	\$48,869
MDC 5 (Diseases and Disorders of the Circulatory System)--Cases with mechanical ventilation >96 hours	16,923	20.7	\$84,565
MDC 6 (Diseases and Disorders of the Digestive System)--Cases with mechanical ventilation > 96 hours	6,401	22.4	\$73,759
MDC 7 (Diseases and Disorders of the Hepatobiliary System and Pancreas)--Cases with mechanical ventilation > 96 hours	1,803	24.5	\$80,477
MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue)--Cases with mechanical ventilation > 96 hours	2,780	22.3	\$83,271
MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast)--Cases with mechanical ventilation > 96 hours	390	22.2	\$68,288

<b>Mechanical Ventilation &gt; 96 Hours Across All MDCs</b>			
<b>MDC</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MDC 10 (Endocrine, Nutritional and Metabolic Diseases and Disorders)--Cases with mechanical ventilation > 96 hours	1,168	20.9	\$60,682
MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract)--Cases with mechanical ventilation > 96 hours	2,325	19.6	\$57,893
MDC 12 (Diseases and Disorders of the Male Reproductive System)--Cases with mechanical ventilation > 96 hours	54	26.8	\$95,204
MDC 13 (Diseases and Disorders of the Female Reproductive System)--Cases with mechanical ventilation > 96 hours	89	24.6	\$83,319
MDC 14 (Pregnancy, Childbirth and the Puerperium)--Cases with mechanical ventilation > 96 hours	22	17.4	\$56,981
MDC 16 (Diseases and Disorders of Blood, Blood Forming Organs, Immunologic Disorders)--Cases with mechanical ventilation > 96 hours	468	20.1	\$68,658
MDC 17 (Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms)--Cases with mechanical ventilation > 96 hours	538	29.7	\$99,968
MDC 18 (Infectious and Parasitic Diseases, Systemic or Unspecified Sites)--Cases with mechanical ventilation > 96 hours	48,176	17.3	\$55,022
MDC 19 (Mental Diseases and Disorders)--Cases with mechanical ventilation > 96 hours	54	29.3	\$52,749
MDC 20 (Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders)--Cases with mechanical ventilation > 96 hours	312	20.5	\$47,637
MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs)--Cases with mechanical ventilation > 96 hours	2,436	18.2	\$57,712
MDC 22 (Burns)--Cases with mechanical ventilation > 96 hours	242	34.8	\$188,704
MDC 23 (Factors Influencing Health Status and Other Contacts with Health Services)--Cases with mechanical ventilation > 96 hours	64	17.7	\$50,821
MDC 24 (Multiple Significant Trauma)--Cases with mechanical ventilation > 96 hours	922	17.6	\$72,358

<b>Mechanical Ventilation &gt; 96 Hours Across All MDCs</b>			
<b>MDC</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MDC 25 (Human Immunodeficiency Virus Infections)--Cases with mechanical ventilation > 96 hours	363	19.1	\$56,688

As shown in the table, the top 5 MDCs with the largest number of cases reporting mechanical ventilation > 96 hours are MDC 18, with 48,176 cases; MDC 4, with 27,793 cases; MDC 5, with 16,923 cases; MDC 1, with 13,668 cases; and MDC 6, with 6,401 cases. We noted that the claims data demonstrate that the average length of stay is consistent with what we would expect for cases reporting the use of mechanical ventilation >96 hours across each of the 25 MDCs. The top 5 MDCs with the highest average costs for cases reporting mechanical ventilation >96 hours were MDC 22, with average costs of \$188,704; MDC 17, with average costs of \$99,968; MDC 12, with average costs of \$95,204; MDC 5, with average costs of \$84,565; and MDC 13, with average costs of \$83,319. We noted that the data for MDC 8 demonstrated similar results compared to MDC 13 with average costs of \$83,271 for cases reporting mechanical ventilation > 96 hours. In summary, the claims data reflect a wide variance with regard to the frequency and average costs for cases reporting the use of mechanical ventilation > 96 hours.

We also examined claims data across each of the 25 MDCs for the number of cases reporting the use of mechanical ventilation <= 96 hours. Our findings are shown in the table below.

<b>Mechanical Ventilation &lt;= 96 Hours Across All MDCs</b>
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<b>MDC</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
All cases with mechanical ventilation <= 96 hours	266,583	8.5	\$26,668
MDC 1 (Diseases and Disorders of the Nervous System)--Cases with mechanical ventilation <= 96 hours	29,896	7.4	\$22,838
MDC 2 (Disease and Disorders of the Eye)--Cases with mechanical ventilation <= 96 hours	60	8.4	\$29,708
MDC 3 (Diseases and Disorders of the Ear, Nose, Mouth and Throat)--Cases with mechanical ventilation <= 96 hours	1,397	9.8	\$29,479
MDC 4 (Diseases and Disorders of the Respiratory System)--Cases with mechanical ventilation <= 96 hours	64,861	7.8	\$20,929
MDC 5 (Diseases and Disorders of the Circulatory System)--Cases with mechanical ventilation <= 96 hours	45,147	8.8	\$35,818
MDC 6 (Diseases and Disorders of the Digestive System)--Cases with mechanical ventilation <= 96 hours	15,629	11.3	\$33,660
MDC 7 (Diseases and Disorders of the Hepatobiliary System and Pancreas)--Cases with mechanical ventilation <= 96 hours	4,678	10.5	\$31,565
MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue)--Cases with mechanical ventilation <= 96 hours	7,140	10.4	\$40,183
MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast)--Cases with mechanical ventilation <= 96 hours	1,036	10.7	\$26,809
MDC 10 (Endocrine, Nutritional and Metabolic Diseases and Disorders)--Cases with mechanical ventilation <= 96 hours	3,591	9.0	\$23,863
MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract)--Cases with mechanical ventilation <= 96 hours	5,506	10.2	\$27,951
MDC 12 (Diseases and Disorders of the Male Reproductive System)--Cases with mechanical ventilation <= 96 hours	168	11.5	\$35,009
MDC 13 (Diseases and Disorders of the Female Reproductive System)--Cases with mechanical ventilation <= 96 hours	310	10.8	\$32,382

<b>Mechanical Ventilation &lt;= 96 Hours Across All MDCs</b>			
<b>MDC</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MDC 14 (Pregnancy, Childbirth and the Puerperium)--Cases with mechanical ventilation <= 96 hours	55	7.6	\$21,785
MDC 16 (Diseases and Disorders of Blood, Blood Forming Organs, Immunologic Disorders)--Cases with mechanical ventilation <= 96 hours	1,171	8.7	\$26,138
MDC 17 (Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms)--Cases with mechanical ventilation <= 96 hours	1,178	15.3	\$46,335
MDC 18 (Infectious and Parasitic Diseases, Systemic or Unspecified Sites)--Cases with mechanical ventilation <= 96 hours	69,826	8.5	\$25,253
MDC 19 (Mental Diseases and Disorders)--Cases with mechanical ventilation <= 96 hours	264	10.4	\$18,805
MDC 20 (Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders)--Cases with mechanical ventilation <= 96 hours	918	8.3	\$19,376
MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs)--Cases with mechanical ventilation <= 96 hours	10,842	6.5	\$17,843
MDC 22 (Burns)--Cases with mechanical ventilation <= 96 hours	353	9.7	\$45,557
MDC 23 (Factors Influencing Health Status and Other Contacts with Health Services)--Cases with mechanical ventilation <= 96 hours	307	6.6	\$16,159
MDC 24 (Multiple Significant Trauma)--Cases with mechanical ventilation <= 96 hours	1,709	8.8	\$36,475
MDC 25 (Human Immunodeficiency Virus Infections)--Cases with mechanical ventilation <= 96 hours	541	10.4	\$29,255

As shown in the table, the top 5 MDCs with the largest number of cases reporting mechanical ventilation <= 96 hours are MDC 18, with 69,826 cases; MDC 4, with 64,861 cases; MDC 5, with 45,147 cases; MDC 1, with 29,896 cases; and MDC 6, with 15,629 cases. We noted that the claims data demonstrate that the average length of stay is

consistent with what we would expect for cases reporting the use of mechanical ventilation  $\leq$  96 hours across each of the 25 MDCs. The top 5 MDCs with the highest average costs for cases reporting mechanical ventilation  $\leq$  96 hours are MDC 17, with average costs of \$46,335; MDC 22, with average costs of \$45,557; MDC 8, with average costs of \$40,183; MDC 24, with average costs of \$36,475; and MDC 5, with average costs of \$35,818. Similar to the cases reporting mechanical ventilation  $>$  96 hours, the claims data for cases reporting the use of mechanical ventilation  $\leq$  96 hours also reflect a wide variance with regard to the frequency and average costs. Depending on the number of cases in each MS-DRG, it may be difficult to detect patterns of complexity and resource intensity.

With respect to the requestor's statement that reporting for other purposes, such as quality measures, clinical trials, and Joint Commission and State certification or survey cases, is based on the principal diagnosis, and their belief that patients who present with cerebral infarction or cerebral hemorrhage and acute respiratory failure are currently in conflict for principal diagnosis sequencing because the cerebral infarction or cerebral hemorrhage code is needed as the principal diagnosis for quality reporting and other purposes (however, acute respiratory failure is needed as the principal diagnosis for purposes of appropriate payment under the MS-DRGs), we noted that providers are required to assign the principal diagnosis according to the ICD-10-CM Official Guidelines for Coding and Reporting and these assignments are not based on factors such as quality measures or clinical trials indications. Furthermore, we do not base MS-DRG reclassification decisions on those factors. If the cerebral

hemorrhage or ischemic cerebral infarction is the reason for admission to the hospital, the cerebral hemorrhage or ischemic cerebral infarction diagnosis code should be assigned as the principal diagnosis.

We acknowledged in the proposed rule that new MS-DRGs were created for cases of patients with sepsis requiring mechanical ventilation greater than and less than 96 hours. However, those MS-DRGs (MS-DRG 575 (Septicemia with Mechanical Ventilation 96+ Hours Age >17) and MS-DRG 576 (Septicemia without Mechanical Ventilation 96+ Hours Age>17)) were created several years ago, in FY 2007 (71 FR 47938 through 47939) in response to public comments suggesting alternatives for the need to recognize the treatment for that subset of patients with severe sepsis who exhibit a greater degree of severity and resource consumption as septicemia is a systemic condition, and also as a preliminary step in the transition from the CMS DRGs to MS-DRGs.

We stated in the proposed rule that we believe that additional analysis and efforts toward a broader approach to refining the MS-DRGs for cases of patients requiring mechanical ventilation across the MDCs involves carefully examining the potential for instability in the relative weights and disrupting the integrity of the MS-DRG system based on the creation of separate MS-DRGs involving small numbers of cases for various indications in which mechanical ventilation may be required.

The second request focused on patients diagnosed with *any* neurological condition classified under MDC 1 requiring mechanical ventilation in the absence of an O.R. procedure and without having received a thrombolytic agent. Because the first request

specifically involved analysis for the acute neurological conditions of cerebral infarction and intracranial hemorrhage under MDC 1 and our findings did not support creating new MS-DRGs for those specific conditions, we did not perform separate claims analysis for other conditions classified under MDC 1.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, we did not propose to create new MS-DRGs for cases that identify patients diagnosed with neurological conditions classified under MDC 1 who require mechanical ventilation with or without a thrombolytic and in the absence of an O.R. procedure.

Comment: Commenters supported CMS' proposal to not create new MS-DRGs, classified under MDC 1, for cases representing patients diagnosed with a neurological condition who require mechanical ventilation with or without a thrombolytic, and in the absence of an O.R. procedure. The commenters stated that the proposal was reasonable, given the data, the ICD-10-CM diagnosis codes, the ICD-10-PCS procedure codes, and the information provided. However, the commenters also recommended that CMS continue to conduct further analyses across all the MDCs for the subset of patients who require mechanical ventilation in an effort to better address the reporting and payment issues.

Response: We appreciate the commenters' support and agree that further analyses are necessary to evaluate the development of potential proposals for the subset of patients requiring mechanical ventilation across all the MDCs.

Comment: One commenter disagreed with CMS' proposal to not create new MS-DRGs for patients admitted with strokes and treated with mechanical ventilation.

The commenter expressed appreciation for CMS' efforts in analyzing the cost and length of stay data for this subset of patients. However, the commenter believed that the results of the analysis identifying patients who receive mechanical ventilation >96 hours and also have an MCC demonstrate that these cases require twice the cost of all cases in MS-DRG 61 (Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent with MCC) and MS-DRG 64 (Intracranial Hemorrhage or Cerebral Infarction with MCC). The commenter requested that CMS reconsider alternative options for this subset of patients due to the cost and length of stay disparities.

Response: We acknowledge the commenters' concern that the average length of stay and average costs for cases where mechanical ventilation >96 hours was reported with an MCC for MS-DRG 61 and MS-DRG 64 are greater when compared to the average length of stay and average costs for all cases in those MS-DRGs. However, as stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20195), our clinical advisors noted that patients requiring mechanical ventilation are known to be more resource intensive and it would not be practical to create new MS-DRGs for this subset of patients given the various other indications in which mechanical ventilation may be utilized for other patients. We will consider additional analysis in the future in our efforts toward a broader approach to refining the MS-DRGs for cases of patients requiring mechanical ventilation across the MDCs.

Comment: One commenter suggested that, although CMS' analysis of the cases reporting a neurological condition with mechanical ventilation was acceptable, CMS consider creating a new MS-DRG for poisoning with mechanical ventilation in future

rulemaking. The commenter believed that a patient who is in critical condition as a result of a poisoning and requires prolonged mechanical ventilation is not being recognized appropriately under the current MS-DRG relative payment weights.

Response: We appreciate the commenter's input and suggestion. As noted earlier, we will consider additional analysis in our efforts toward a broader approach to refining the MS-DRGs for cases of patients requiring mechanical ventilation across the MDCs.

After consideration of the public comments we received, we are finalizing our proposal to not create new MS-DRGs, classified under MDC 1, for cases that identify patients requiring mechanical ventilation and are diagnosed with stroke or any other neurological condition with or without a thrombolytic, and in the absence of an O.R. procedure for FY 2019.

#### 4. MDC 5 (Diseases and Disorders of the Circulatory System)

##### a. Pacemaker Insertions

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56804 through 56809), we discussed a request to examine the ICD-10-PCS procedure code combinations that describe procedures involving pacemaker insertions to determine if some procedure code combinations were excluded from the Version 33 ICD-10 MS-DRG assignments for MS-DRGs 242, 243, and 244 (Permanent Cardiac Pacemaker Implant with MCC, with CC, and without CC/MCC, respectively) under MDC 5. We finalized our proposal to modify the Version 34 ICD-10 MS-DRG GROUPER logic so the specified procedure code combinations were no longer required for assignment into those MS-DRGs. As a

result, the logic for pacemaker insertion procedures was simplified by separating the procedure codes describing cardiac pacemaker device insertions into one list and separating the procedure codes describing cardiac pacemaker lead insertions into another list. Therefore, when any ICD-10-PCS procedure code describing the insertion of a pacemaker device is reported from that specific logic list with any ICD-10-PCS procedure code describing the insertion of a pacemaker lead from that specific logic list (81 FR 56804 through 56806), the case is assigned to MS-DRGs 242, 243, and 244 under MDC 5.

We then discussed our examination of the Version 33 GROUPER logic for MS-DRGs 258 and 259 (Cardiac Pacemaker Device Replacement with and without MCC, respectively) because assignment of cases to these MS-DRGs also included qualifying ICD-10-PCS procedure code combinations involving pacemaker insertions (81 FR 56806 through 56808). Specifically, the logic for Version 33 ICD-10 MS-DRGs 258 and 259 included ICD-10-PCS procedure code combinations describing the removal of pacemaker devices and the insertion of new pacemaker devices. We finalized our proposal to modify the Version 34 ICD-10 MS-DRG GROUPER logic for MS-DRGs 258 and 259 to establish that a case reporting any procedure code from the list of ICD-10-PCS procedure codes describing procedures involving pacemaker device insertions without any other procedure codes describing procedures involving pacemaker leads reported would be assigned to MS-DRGs 258 and 259 (81 FR 56806 through 56807) under MDC 5. In addition, we pointed out that a limited number of ICD-10-PCS procedure codes describing pacemaker insertion are classified as non-operating room

(non-O.R.) codes within the MS-DRGs and that the Version 34 ICD-10 MS-DRG GROUPER logic would continue to classify these procedure codes as non-O.R. codes. We noted that a case reporting any one of these non-O.R. procedure codes describing a pacemaker device insertion without any other procedure code involving a pacemaker lead would be assigned to MS-DRGs 258 and 259. Therefore, the listed procedure codes describing a pacemaker device insertion under MS-DRGs 258 and 259 are designated as non-O.R. affecting the MS-DRG.

Lastly, we discussed our examination of the Version 33 GROUPER logic for MS-DRGs 260, 261, and 262 (Cardiac Pacemaker Revision Except Device Replacement with MCC, with CC, and without CC/MCC, respectively), and noted that cases assigned to these MS-DRGs also included lists of procedure code combinations describing procedures involving the removal of pacemaker leads and the insertion of new leads, in addition to lists of single procedure codes describing procedures involving the insertion of pacemaker leads, removal of cardiac devices, and revision of cardiac devices (81 FR 56808). We finalized our proposal to modify the ICD-10 MS-DRG GROUPER logic for MS-DRGs 260, 261, and 262 so that cases reporting any one of the listed ICD-10-PCS procedure codes describing procedures involving pacemakers and related procedures and associated devices are assigned to MS DRGs 260, 261, and 262 under MDC 5. Therefore, the GROUPER logic that required a combination of procedure codes be reported for assignment into MS-DRGs 260, 261 and 262 under Version 33 was no longer required effective with discharges occurring on or after October 1, 2016 (FY 2017) under Version 34 of the ICD-10 MS-DRGs.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20198), we noted that while the discussion in the FY 2017 IPPS/LTCH PPS final rule focused on the MS-DRGs involving pacemaker procedures under MDC 5, similar GROUPER logic exists in Version 33 of the ICD-10 MS-DRGs under MDC 1 (Diseases and Disorders of the Nervous System) in MS-DRGs 040, 041 and 042 (Peripheral, Cranial Nerve and Other Nervous System Procedures with MCC, with CC or Peripheral Neurostimulator and without CC/MCC, respectively) and MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs) in MS-DRGs 907, 908, and 909 (Other O.R. Procedures for Injuries with MCC, with CC, and without MCC, respectively) where procedure code combinations involving cardiac pacemaker device insertions or removals and cardiac pacemaker lead insertions or removals are required to be reported together for assignment into those MS-DRGs. We also noted that, with the exception of when a principal diagnosis is reported from MDC 1, MDC 5, or MDC 21, the procedure codes describing the insertion, removal, replacement, or revision of pacemaker devices are assigned to a medical MS-DRG in the absence of another O.R. procedure according to the GROUPER logic. We referred the reader to the ICD-10 MS-DRG Definitions Manual Version 33, which is available via the Internet on the CMS Web site at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2016-IPPS-Final-Rule-Home-Page-Items/FY2016-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending> for complete documentation of the GROUPER logic that was in effect at that time for the Version 33 ICD-10 MS-DRGs discussed earlier.

As discussed in the FY 2019 IPS/LTCH PPS proposed rule (83 FR 20198), for FY 2019, we received a request to assign all procedures involving the insertion of pacemaker devices to surgical MS-DRGs, regardless of the principal diagnosis. The requestor recommended that procedures involving pacemaker insertion be grouped to surgical MS-DRGs within the MDC to which the principal diagnosis is assigned, or that they group to MS-DRGs 981, 982, and 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC and without CC/MCC, respectively). Currently, in Version 35 of the ICD-10 MS-DRGs, procedures involving pacemakers are assigned to MS-DRGs 040, 041, and 042 (Peripheral, Cranial Nerve and Other Nervous System Procedures with MCC, with CC or Peripheral Neurostimulator and without CC/MCC, respectively) under MDC 1 (Diseases and Disorders of the Nervous System), to MS-DRGs 242, 243, and 244 (Permanent Cardiac Pacemaker Implant with MCC, with CC, and without CC/MCC, respectively), MS-DRGs 258 and 259 (Cardiac Pacemaker Device Replacement with MCC and without MCC, respectively), and MS-DRGs 260, 261 and 262 (Cardiac Pacemaker Revision Except Device Replacement with MCC, with CC, and without CC/MCC, respectively) under MDC 5 (Diseases and Disorders of the Circulatory System), and to MS-DRGs 907, 908, and 909 (Other O.R. Procedures for Injuries with MCC, with CC, and without CC/MCC, respectively), under MDC 21 (Injuries, Poisoning and Toxic Effects of Drugs), with all other unrelated principal diagnoses resulting in a medical MS-DRG assignment. According to the requestor, the medical MS-DRGs do not provide adequate payment for the pacemaker device, specialized operating suites, time, skills, and other resources involved for pacemaker

insertion procedures. Therefore, the requestor recommended that procedures involving pacemaker insertions be grouped to surgical MS-DRGs. We refer readers to the ICD-10 MS-DRG Definitions Manual Version 35, which is available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>

for complete documentation of the GROUPER logic for the MS-DRGs discussed earlier.

The following procedure codes describe procedures involving the insertion of a cardiac rhythm related device which are classified as a type of pacemaker insertion under the ICD-10 MS-DRGs. These four codes are assigned to MS-DRGs 040, 041, and 042, as well as MS-DRGs 907, 908, and 909, and are designated as O.R. procedures.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0JH60PZ	Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach
0JH63PZ	Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach
0JH80PZ	Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach
0JH83PZ	Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach

We examined cases from the September update of the FY 2017 MedPAR claims data for cases involving pacemaker insertion procedures reporting the above ICD-10-PCS codes in MS-DRGs 040, 041 and 042 under MDC 1. Our findings are shown in the following table.

<b>Cases Involving Pacemaker Insertion Procedures in MDC 1</b>			
<b>MS-DRG in MDC 1</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 040--All cases	4,462	10.4	\$26,877
MS-DRG 040--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	13	14.2	\$55,624
MS-DRG 040--Cases with procedure code 0JH63PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach)	2	3.5	\$15,826
MS-DRG 040--Cases with procedure code 0JH80PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach)	0	0	0
MS-DRG 040--Cases with procedure code 0JH83PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach)	0	0	0
MS-DRG 041--All cases	5,648	5.2	\$16,927
MS-DRG 041--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	12	6.4	\$22,498
MS-DRG 041--Cases with procedure code 0JH63PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach)	4	5	\$17,238
MS-DRG 041--Cases with procedure code 0JH80PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach)	0	0	0
MS-DRG 041--Cases with procedure code 0JH83PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach)	0	0	0
MS-DRG 042--All cases	2,154	3.1	\$13,730
MS-DRG 042--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	5	8	\$18,183

<b>Cases Involving Pacemaker Insertion Procedures in MDC 1</b>			
<b>MS-DRG in MDC 1</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 042--Cases with procedure code 0JH83PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach)	0	0	0
MS-DRG 042--Cases with procedure code 0JH80PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach)	0	0	0
MS-DRG 042--Cases with procedure code 0JH83PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach)	0	0	0

The following table is a summary of the findings shown above from our review of MS-DRGs 040, 041 and 042 and the total number of cases reporting a pacemaker insertion procedure.

<b>MS-DRGs for Cases Involving Pacemaker Insertion Procedures in MDC 1</b>			
<b>MS-DRG in MDC 1</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 040, 041, and 042--All cases	12,264	6.7	\$19,986
MS-DRGs 040, 041, and 042--Cases with a pacemaker insertion procedure	36	9.1	\$32,906

We found a total of 12,264 cases in MS-DRGs 040, 041, and 042 with an average length of stay of 6.7 days and average costs of \$19,986. We found a total of 36 cases in MS-DRGs 040, 041, and 042 reporting procedure codes describing the insertion of a pacemaker device with an average length of stay of 9.1 days and average costs of \$32,906.

We then examined cases involving pacemaker insertion procedures reporting those same four ICD-10-PCS procedure codes 0JH60PZ, 0JH63PZ, 0JH80PZ and 0JH83PZ in MS-DRGs 907, 908, and 909 under MDC 21. Our findings are shown in the following table.

<b>MS-DRGs for Cases Involving Pacemaker Insertion Procedures in MDC 21</b>			
<b>MS-DRG in MDC 21</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 907–All cases	7,405	10.1	\$28,997
MS-DRG 907–Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	7	11.1	\$60,141
MS-DRG 908–All cases	8,519	5.2	\$14,282
MS-DRG 908–Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	4	3.8	\$35,678
MS-DRG 909–All cases	3,224	3.1	\$9,688
MS-DRG 909–Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	2	2	\$42,688

We note that there were no cases found where procedure codes 0JH63PZ, 0JH80PZ or 0JH83PZ were reported in MS-DRGs 907, 908 and 909 under MDC 21 and, therefore, they are not displayed in the table.

The following table is a summary of the findings shown above from our review of MS-DRGs 907, 908, and 909 and the total number of cases reporting a pacemaker insertion procedure.

<b>MS-DRGs for Cases Involving Pacemaker Insertion Procedures in MDC 21</b>			
<b>MS-DRG in MDC 21</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 907, 908 and 909–All cases	19,148	6.7	\$19,199
MS-DRGs 907, 908 and 909–Cases with a pacemaker insertion procedure	13	7.5	\$49,929

We found a total of 19,148 cases in MS-DRGs 907, 908, and 909 with an average length of stay of 6.7 days and average costs of \$19,199. We found a total of 13 cases in MS-DRGs 907, 908, and 909 reporting pacemaker insertion procedures with an average length of stay of 7.5 days and average costs of \$49,929.

We also examined cases involving pacemaker insertion procedures reporting the following procedure codes that are assigned to MS-DRGs 242, 243, and 244 under MDC 5.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0JH604Z	Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach
0JH605Z	Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach
0JH606Z	Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach
0JH607Z	Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, open approach
0JH60PZ	Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach
0JH634Z	Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, percutaneous approach
0JH635Z	Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, percutaneous approach
0JH636Z	Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, percutaneous approach
0JH637Z	Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, percutaneous approach
0JH63PZ	Insertion of cardiac rhythm related device into chest subcutaneous

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
	tissue and fascia, percutaneous approach
0JH804Z	Insertion of pacemaker, single chamber into abdomen subcutaneous tissue and fascia, open approach
0JH805Z	Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, open approach
0JH806Z	Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, open approach
0JH807Z	Insertion of cardiac resynchronization pacemaker pulse generator into abdomen subcutaneous tissue and fascia, open approach
0JH80PZ	Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach
0JH834Z	Insertion of pacemaker, single chamber into abdomen subcutaneous tissue and fascia, percutaneous approach
0JH835Z	Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, percutaneous approach
0JH836Z	Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, percutaneous approach
0JH837Z	Insertion of cardiac resynchronization pacemaker pulse generator into abdomen subcutaneous tissue and fascia, percutaneous approach
0JH83PZ	Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, percutaneous approach

Our data findings are shown in the following table. We note that procedure codes displayed with an asterisk (\*) in the table are designated as non-O.R. procedures affecting the MS-DRG.

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 242--All cases	18,205	6.9	\$26,414
MS-DRG 242--Cases with procedure code 0JH604Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach)	2,518	7.7	\$25,004

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 242-Cases with procedure code 0JH605Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach)	306	7.7	\$24,454
MS-DRG 242--Cases with procedure code 0JH606Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach)	13,323	6.7	\$25,497
MS-DRG 242--Cases with procedure code 0JH607Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, open approach)	1,528	8.1	\$37,060
MS-DRG 242--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	5	16.6	\$59,334
MS-DRG 242--Cases with procedure code 0JH634Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, percutaneous approach)	65	8.5	\$26,789
MS-DRG 242--Cases with procedure code 0JH635Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, percutaneous approach)	10	7	\$35,104
MS-DRG 242--Cases with procedure code 0JH636Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, percutaneous approach)	313	6.4	\$23,699
MS-DRG 242--Cases with procedure code 0JH637Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest Subcutaneous tissue and fascia, percutaneous approach)	82	7.1	\$35,382

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 242--Cases with procedure code 0JH63PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach)	2	12.5	\$32,405
MS-DRG 242--Cases with procedure code 0JH804Z* (Insertion of pacemaker, single chamber into abdomen subcutaneous tissue and fascia, open approach)	25	14.4	\$43,080
MS-DRG 242--Cases with procedure code 0JH805Z* (Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, open approach)	2	4	\$26,949
MS-DRG 242--Cases with procedure code 0JH806Z* (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, open approach)	50	6.8	\$25,306
MS-DRG 242--Cases with procedure code 0JH807Z (Insertion of cardiac resynchronization pacemaker pulse generator into abdomen subcutaneous tissue and fascia, open approach)	5	21.2	\$67,908
MS-DRG 242--Cases with procedure code 0JH836Z (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, percutaneous approach)	1	5	\$36,111
MS-DRG 243--All cases	24,586	4	\$18,669
MS-DRG 243--Cases with procedure code 0JH604Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach)	2,537	4.7	\$17,118
MS-DRG 243--Cases with procedure code 0JH605Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach)	271	4.4	\$17,268

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 243--Cases with procedure code 0JH606Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach)	19,921	3.9	\$18,306
MS-DRG 243--Cases with procedure code 0JH607Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, open approach)	1,236	4.4	\$28,658
MS-DRG 243--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	6	4.2	\$20,994
MS-DRG 243--Cases with procedure code 0JH634Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, percutaneous approach)	55	5.2	\$16,784
MS-DRG 243--Cases with procedure code 0JH635Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, percutaneous approach)	15	4.1	\$17,938
MS-DRG 243--Cases with procedure code 0JH636Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, percutaneous approach)	431	3.7	\$16,164
MS-DRG 243--Cases with procedure code 0JH637Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, percutaneous approach)	58	5	\$28,926
MS-DRG 243--Cases with procedure code 0JH63PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach)	3	8.3	\$23,717

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 243--Cases with procedure code 0JH804Z* (Insertion of pacemaker, single chamber into abdomen subcutaneous tissue and fascia, open approach)	10	8.2	\$20,871
MS-DRG 243--Cases with procedure code 0JH805Z* (Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, open approach)	1	4	\$15,739
MS-DRG 243--Cases with procedure code 0JH806Z* (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, open approach)	57	4.4	\$18,787
MS-DRG 243--Cases with procedure code 0JH807Z (Insertion of cardiac resynchronization pacemaker pulse generator into abdomen subcutaneous tissue and fascia, open approach)	3	4	\$19,653
MS-DRG 243--Cases with procedure code 0JH80PZ (Insertion of cardiac rhythm related device into abdomen subcutaneous tissue and fascia, open approach)	1	7	\$16,224
MS-DRG 243--Cases with procedure code 0JH836Z* (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, percutaneous approach)	1	2	\$14,005
MS-DRG 244--All cases	15,974	2.7	\$15,670
MS-DRG 244--Cases with procedure code 0JH604Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach)	1,045	3.2	\$14,541
MS-DRG 244--Cases with procedure code 0JH605Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach)	127	3	\$13,208

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 244--Cases with procedure code 0JH606Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach)	14,092	2.7	\$15,596
MS-DRG 244--Cases with procedure code 0JH607Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, open approach)	303	2.8	\$26,221
MS-DRG 244--Cases with procedure code 0JH60PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach)	2	4.5	\$9,248
MS-DRG 244--Cases with procedure code 0JH634Z* (Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, percutaneous approach)	32	2.8	\$11,525
MS-DRG 244--Cases with procedure code 0JH635Z* (Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, percutaneous approach)	1	2	\$30,100
MS-DRG 244--Cases with procedure code 0JH636Z* (Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, percutaneous approach)	320	2.6	\$13,670
MS-DRG 244--Cases with procedure code 0JH637Z (Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, percutaneous approach)	20	2.7	\$19,218
MS-DRG 244--Cases with procedure code 0JH63PZ (Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, percutaneous approach)	1	3	\$12,120

<b>Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 244--Cases with procedure code 0JH805Z* (Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, open approach)	1	1	\$21,604
MS-DRG 244--Cases with procedure code 0JH806Z* (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, open approach)	36	3.2	\$16,492
MS-DRG 244--Cases with procedure code 0JH836Z* (Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, percutaneous approach)	1	3	\$12,160

The following table is a summary of the findings shown above from our review of MS-DRGs 242, 243, and 244 and the total number of cases reporting a pacemaker insertion procedure.

<b>MS-DRGs for Cases Involving Pacemaker Insertion Procedures in MDC 5</b>			
<b>MS-DRG in MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 242, 243 and 244--All cases	58,765	4.6	\$20,253
MS-DRGs 242, 243, and 244--Cases with a pacemaker insertion procedure	58,822*	4.6	\$20,270

\*The figure is not adjusted for cases reporting more than one pacemaker insertion procedure code. The figure represents the frequency in which the number of pacemaker insertion procedures was reported.

We found a total of 58,765 cases in MS-DRGs 242, 243, and 244 with an average length of stay of 4.6 days and average costs of \$20,253. We found a total of 58,822 cases reporting pacemaker insertion procedures in MS-DRGs 242, 243, and 244 with an average length of stay of 4.6 days and average costs of \$20,270. We note that the

analysis performed is by procedure code, and because multiple pacemaker insertion procedures may be reported on a single claim, the total number of these pacemaker insertion procedure cases exceeds the total number of all cases found across MS-DRGs 242, 243, and 244 (58,822 procedures versus 58,765 cases).

We then analyzed claims for cases reporting a procedure code describing (1) the insertion of a pacemaker device only, (2) the insertion of a pacemaker lead only, and (3) both the insertion of a pacemaker device and a pacemaker lead across all the MDCs except MDC 5 to determine the number of cases currently grouping to medical MS-DRGs and the potential impact of these cases moving into the surgical unrelated MS-DRGs 981, 982 and 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC and without CC/MCC, respectively). Our findings are shown in the following table.

<b>Pacemaker Insertion Procedures in Medical MS-DRGs</b>			
<b>All MDCs Except MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Procedures for insertion of pacemaker device	2,747	9.5	\$29,389
Procedures for insertion of pacemaker lead	2,831	9.4	\$29,240
Procedures for insertion of pacemaker device with insertion of pacemaker lead	2,709	9.4	\$29,297

We found a total of 2,747 cases reporting the insertion of a pacemaker device in 177 medical MS-DRGs with an average length of stay of 9.5 days and average costs of \$29,389 across all the MDCs except MDC 5. We found a total of 2,831 cases reporting the insertion of a pacemaker lead in 175 medical MS-DRGs with an average length of stay of 9.4 days and average costs of \$29,240 across all the MDCs except MDC 5. We

found a total of 2,709 cases reporting both the insertion of a pacemaker device and the insertion of a pacemaker lead in 170 medical MS-DRGs with an average length of stay of 9.4 days and average costs of \$29,297 across all the MDCs except MDC 5.

We also analyzed claims for cases reporting a procedure code describing the insertion of a pacemaker device with a procedure code describing the insertion of a pacemaker lead in all the surgical MS-DRGs across all the MDCs except MDC 5. Our findings are shown in the following table.

<b>Pacemaker Insertion Procedures in Surgical MS-DRGs</b>			
<b>All MDCs Except MDC 5</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
Procedures for insertion of pacemaker device with insertion of pacemaker lead	3,667	12.8	\$48,856

We found a total of 3,667 cases reporting the insertion of a pacemaker device and the insertion of a pacemaker lead in 194 surgical MS-DRGs with an average length of stay of 12.8 days and average costs of \$48,856 across all the MDCs except MDC 5.

For cases where the insertion of a pacemaker device, the insertion of a pacemaker lead or the insertion of both a pacemaker device and lead were reported on a claim grouping to a medical MS-DRG, the average length of stay and average costs were generally higher for these cases when compared to the average length of stay and average costs for all the cases in their assigned MS-DRGs. For example, we found 113 cases reporting both the insertion of a pacemaker device and lead in MS-DRG 378 (G.I. Hemorrhage with CC), with an average length of stay of 7.1 days and average costs of \$23,711. The average length of stay for all cases in MS-DRG 378 was 3.6 days and

the average cost for all cases in MS-DRG 378 was \$7,190. The average length of stay for cases reporting both the insertion of a pacemaker device and lead were twice as long as the average length of stay for all the cases in MS-DRG 378 (7.1 days versus 3.6 days). In addition, the average costs for the cases reporting both the insertion of a pacemaker device and lead were approximately \$16,500 higher than the average costs of all the cases in MS-DRG 378 (\$23,711 versus \$7,190). We refer readers to Table 6P.1c associated with the proposed rule (which is available via the Internet on the CMS website) for the detailed report of our findings across the other medical MS-DRGs. We note that the average costs and average length of stay for cases reporting the insertion of a pacemaker device, the insertion of a pacemaker lead or the insertion of both a pacemaker device and lead are reflected in Columns D and E, while the average costs and average length of stay for all cases in the respective MS-DRG are reflected in Columns I and J.

The claims data results from our analysis of this request showed that if we were to support restructuring the GROUPER logic so that pacemaker insertion procedures that include a combination of the insertion of the pacemaker device with the insertion of the pacemaker lead are designated as an O.R. procedure across all the MDCs, we would expect approximately 2,709 cases to move or “shift” from the medical MS-DRGs where they are currently grouping into the surgical unrelated MS-DRGs 981, 982, and 983.

Our clinical advisors reviewed the data results and recommended that pacemaker insertion procedures involving a complete pacemaker system (insertion of pacemaker device combined with insertion of pacemaker lead) warrant classification into surgical MS-DRGs because the patients receiving these devices demonstrate greater treatment

difficulty and utilization of resources when compared to procedures that involve the insertion of only the pacemaker device or the insertion of only the pacemaker lead. We note that the request we addressed in the FY 2017 IPPS/LTCH PPS proposed rule (81 FR 24981 through 24984) was to determine if some procedure code combinations were excluded from the ICD-10 MS-DRG assignments for MS-DRGs 242, 243, and 244. We proposed and, upon considering public comments received, finalized an alternate approach that we believed to be less complicated. We also stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56806) that we would continue to monitor the MS-DRGs for pacemaker insertion procedures as we receive ICD-10 claims data. Upon further review, we stated that we believe that recreating the procedure code combinations for pacemaker insertion procedures would allow for the grouping of these procedures to the surgical MS-DRGs, which we believe is warranted to better recognize the resources and complexity of performing these procedures. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20203), we proposed to recreate pairs of procedure code combinations involving both the insertion of a pacemaker device with the insertion of a pacemaker lead to act as procedure code combination pairs or “clusters” in the GROUPER logic that are designated as O.R. procedures outside of MDC 5 when reported together.

Comment: Commenters supported the proposal to recreate pairs of procedure code combinations involving both the insertion of a pacemaker device with the insertion of a pacemaker lead to act as procedure code combination pairs or “clusters” in the GROUPER logic that are designated as O.R. procedures outside of MDC 5 when

reported together. One commenter specifically expressed its appreciation of CMS' efforts to update the MS-DRG GROUPER logic to better recognize the resources and complexity of pacemaker device and lead procedures. Another commenter disagreed with the proposal to use pacemaker code pairs for assignment to a surgical MS-DRG, stating it would be more appropriate to designate each pacemaker device and pacemaker lead procedure code as an O.R. procedure to allow initial insertions and replacement of individual components to group to surgical MS-DRGs within all MDCs. According to the commenter, this designation would compensate providers for the cost of the device and the resources utilized in the performance of initial insertions and the replacement of individual components.

Response: We appreciate the commenters' support. With regard to the commenter who disagreed with the proposal to utilize pacemaker code pairs for assignment to a surgical MS-DRG and suggested that the GROUPER logic designate each pacemaker device and pacemaker lead procedure code as an O.R. procedure to allow initial insertions and replacement of individual components to group to surgical MS-DRGs within all MDCs, we note that, as displayed in Table 6P.1c. associated with the FY 2019 IPPS/LTCH PPS proposed rule (which is available via the Internet on the CMS website), our claims analysis for cases reporting a procedure code describing the insertion of a pacemaker device only demonstrated a total of six cases across all the medical MS-DRGs, and for cases reporting a procedure code describing the insertion of a pacemaker lead only, the data demonstrated a total of four cases across all the medical MS-DRGs. As a result, there were a total of only 10 cases where a stand-alone code for

insertion of a pacemaker device procedure or a stand-alone code for insertion of a pacemaker lead procedure was reported. Those 10 cases grouped to 10 different medical MS-DRGs, of which 8 included a CC or MCC diagnosis. Therefore, it is not clear how much of the average costs, the average length of stay, the complexity of service, and resource utilization for those cases are attributable to the insertion of the pacemaker device/lead procedure versus the severity of illness.

After consideration of the public comments we received, we are finalizing our proposal to recreate pairs of procedure code combinations involving both the insertion of a pacemaker device with the insertion of a pacemaker lead to act as procedure code combination pairs or “clusters” in the GROUPER logic that are designated as O.R. procedures outside of MDC 5 when reported together under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

We also proposed to designate all the procedure codes describing the insertion of a pacemaker device or the insertion of a pacemaker lead as non-O.R. procedures when reported as a single, individual stand-alone code based on the recommendation of our clinical advisors as noted in the proposed rule and earlier in this section and consistent with how these procedures were classified under the Version 33 ICD-10 MS-DRG GROUPER logic.

Comment: A number of commenters supported the proposal to designate all the procedure codes describing the insertion of a pacemaker device or the insertion of a pacemaker lead as non-O.R. procedures when reported as a single, individual stand-alone code. However, other commenters opposed the proposal. One commenter acknowledged

that the complexity of inserting a full pacemaker system is greater than when inserting a pacemaker lead or generator. However, this commenter asserted that the complexity does not increase significantly and that the placement of a lead or generator still requires the use of an operating room, sterile field, anesthesiology, and preparing the patient. The commenter believed that the placement of a pacemaker lead or device does require the use of an operating room and expressed concern that CMS would designate the procedures as a non-O.R. procedure.

Response: We appreciate the commenters' support. With regard to the commenter who expressed concern that we proposed to designate procedure codes describing the insertion of a pacemaker device or the insertion of a pacemaker lead as non-O.R. procedures when reported as a single, individual stand-alone code, we note that historically, these procedures have been designated as non-O.R. procedures. As we noted in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20203), our proposal to designate all the procedure codes describing the insertion of a pacemaker device or the insertion of a pacemaker lead as non-O.R. procedures when reported as a single, individual stand-alone code is consistent with how these procedures were classified under the Version 33 ICD-10 MS-DRG GROUPER logic. In addition, our clinical advisors continue to support the non-O.R. designation because, as the commenter noted in its own comments, while these procedures may require a sterile field, anesthesia and preparing the patient, the complexity of inserting a pacemaker lead or generator alone is less than that of inserting a full pacemaker system and the former can be performed in settings such as cardiac catheterization laboratories.

After consideration of the public comments we received, we are finalizing our proposal to designate all the procedure codes describing the insertion of a pacemaker device or the insertion of a pacemaker lead as non-O.R. procedures when reported as a single, individual stand-alone code outside of MDC 5 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

In the proposed rule, we referred readers to Table 6P.1d, Table 6P.1e, and Table 6P.1f. associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) for (1) a complete list of the proposed procedure code combinations or “pairs”; (2) a complete list of the procedure codes describing the insertion of a pacemaker device; and (3) a complete list of the procedure codes describing the insertion of a pacemaker lead. We invited public comments on our lists of procedure codes that we proposed to include for restructuring the ICD-10 MS-DRG GROUPER logic for pacemaker insertion procedures.

In addition, we proposed to maintain the current GROUPER logic for MS-DRGs 258 and 259 (Cardiac Pacemaker Device Replacement with MCC and without MCC, respectively) where the listed procedure codes as shown in the ICD-10 MS-DRG Definitions Manual Version 35, which is available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>, describing a pacemaker device insertion, continue to be designated as “non-O.R.

affecting the MS-DRG” because they are reported when a pacemaker device requires replacement and have a corresponding diagnosis from MDC 5. Also, we proposed to maintain the current GROUPER logic for MS-DRGs 260, 261, and 262 (Cardiac Pacemaker Revision Except Device Replacement with MCC, with CC, and without CC/MCC, respectively) so that cases reporting any one of the listed ICD-10-PCS procedure codes as shown in the ICD-10 MS-DRG Definitions Manual Version 35 describing procedures involving pacemakers and related procedures and associated devices will continue to be assigned to those MS DRGs under MDC 5 because they are reported when a pacemaker device requires revision and they have a corresponding circulatory system diagnosis.

Comment: Commenters agreed with the proposed lists of procedure codes for restructuring the ICD-10 MS DRG GROUPER logic for pacemaker insertion procedures. One commenter also suggested the addition of ICD-10-PCS procedure code 02H63MZ (Insertion of cardiac lead into right atrium, percutaneous approach) and ICD-10-PCS procedure code 02H73MZ (Insertion of cardiac lead into left atrium, percutaneous approach) to Tables 6P.1d. and Table 6P.1f. that were associated with the proposed rule. The commenter noted that the tables included the open and percutaneous endoscopic approaches but did not include the percutaneous approach.

Response: We appreciate the commenters’ support. We agree with the commenter to add ICD-10-PCS procedure codes 02H63MZ and 02H73MZ to Table 6P.1d and as reflected in Table 6P.1f. associated with this final rule (which is available via the Internet on the CMS website), to be included for the pacemaker insertion code

pairs and as stand-alone codes for the insertion of a pacemaker lead. The codes are consistent with the other insertion of cardiac lead procedures and were inadvertently omitted from the initial list.

After consideration of the public comments we received, we are finalizing the lists of the procedure codes in Tables 6P.1d., Table 6P.1e., and Table 6P.1f associated with the proposed rule, with the addition of ICD-10-PCS procedure codes 02H63MZ and 02H73MZ to be included for the pacemaker insertion code pairs and as stand-alone codes for the insertion of a pacemaker lead, as reflected in Tables 6P.1.d. and 6P.1.f. associated with this final rule. We also are finalizing our proposal to maintain the current GROUPER logic for MS-DRGs 258 and 259 and for MS-DRGs 260, 261, and 262 under the ICD-10 Version 36, effective October 1, 2018.

We noted in the proposed rule that, while the requestor did not include the following procedure codes in its request, these codes are also currently designated as O.R. procedure codes and are assigned to MS-DRGs 260, 261, and 262 under MDC 5.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
02PA0MZ	Removal of cardiac lead from heart, open approach
02PA3MZ	Removal of cardiac lead from heart, percutaneous approach
02PA4MZ	Removal of cardiac lead from heart, percutaneous endoscopic approach
02WA0MZ	Revision of cardiac lead in heart, open approach
02WA3MZ	Revision of cardiac lead in heart, percutaneous approach
02WA4MZ	Revision of cardiac lead in heart, percutaneous endoscopic approach
0JPT0PZ	Removal of cardiac rhythm related device from trunk subcutaneous tissue and fascia, open approach
0JPT3PZ	Removal of cardiac rhythm related device from trunk subcutaneous tissue and fascia, percutaneous approach

ICD-10-PCS Code	Code Description
0JWT0PZ	Revision of cardiac rhythm related device in trunk subcutaneous tissue and fascia, open approach
0JWT3PZ	Revision of cardiac rhythm related device in trunk subcutaneous tissue and fascia, percutaneous approach

In the proposed rule, we solicited public comments on whether these procedure codes describing the removal or revision of a cardiac lead and removal or revision of a cardiac rhythm related (pacemaker) device should also be designated as non-O.R. procedure codes for FY 2019 when reported as a single, individual stand-alone code with a principal diagnosis outside of MDC 5 for consistency in the classification among these devices.

Comment: One commenter recommended that CMS not finalize the proposed designation of the procedure codes listed in the above table describing the removal or revisions of a cardiac lead and the removal or revision of a cardiac rhythm related (pacemaker) device from O.R. procedures to non-O.R. procedures when reported as a single, individual stand-alone code when reported with a principal diagnosis outside of MDC 5. Another commenter expressed concern that the rationale for the proposal was not clear and warranted additional clarification about the data used to arrive at this recommendation. According to this commenter, regardless of the principal diagnosis, the resources for procedures involving insertion, removal or revision of a pacemaker generator or lead are the same. The commenter further noted that revisions are often more complex and require greater resources. The commenter recommended that CMS continue to designate the procedures as O.R. procedures and further explain the proposal.

Response: We appreciate the commenter’s feedback. We note that while we were soliciting comments on the procedure codes listed in the table above that describe the removal or revision of a cardiac lead and the removal or revision of a cardiac rhythm related (pacemaker) device, we did not specifically recommend a change to the designation of the procedure codes at this time. We agree with the commenter that the removal or revision of a cardiac lead or pacemaker generator can be more complex and require greater resources than an initial insertion procedure.

After consideration of the public comments we received, we are maintaining the O.R. designation of the procedure codes listed in the above table under the ICD-10 MS-DRGs Version 36, effective October 1, 2018. As additional claims data become available, we will continue to analyze these procedures.

We also note in the proposed rule that, while the requestor did not include the following procedure codes in its request, the codes in the following table became effective October 1, 2016 (FY 2017) and also describe procedures involving the insertion of a pacemaker. Specifically, the following list includes procedure codes that describe an intracardiac or “leadless” pacemaker. These procedure codes are designated as O.R. procedure codes and are currently assigned to MS-DRGs 228 and 229 (Other Cardiothoracic Procedures with MCC and without MCC, respectively) under MDC 5.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
02H40NZ	Insertion of intracardiac pacemaker into coronary vein, open approach
02H43NZ	Insertion of intracardiac pacemaker into coronary vein, percutaneous approach
02H44NZ	Insertion of intracardiac pacemaker into coronary vein, percutaneous endoscopic approach

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
02H60NZ	Insertion of intracardiac pacemaker into right atrium, open approach
02H63NZ	Insertion of intracardiac pacemaker into right atrium, percutaneous approach
02H64NZ	Insertion of intracardiac pacemaker into right atrium, percutaneous endoscopic approach
02H70NZ	Insertion of intracardiac pacemaker into left atrium, open approach
02H73NZ	Insertion of intracardiac pacemaker into left atrium, percutaneous approach
02H74NZ	Insertion of intracardiac pacemaker into left atrium, percutaneous endoscopic approach
02HK0NZ	Insertion of intracardiac pacemaker into right ventricle, open approach
02HK3NZ	Insertion of intracardiac pacemaker into right ventricle, percutaneous approach
02HK4NZ	Insertion of intracardiac pacemaker into right ventricle, percutaneous endoscopic approach
02HL0NZ	Insertion of intracardiac pacemaker into left ventricle, open approach
02HL3NZ	Insertion of intracardiac pacemaker into left ventricle, percutaneous Approach
02HL4NZ	Insertion of intracardiac pacemaker into left ventricle, percutaneous endoscopic approach
02WA0NZ	Revision of intracardiac pacemaker in heart, open approach
02WA3NZ	Revision of intracardiac pacemaker in heart, percutaneous approach
02WA4NZ	Revision of intracardiac pacemaker in heart, percutaneous endoscopic approach
02WAXNZ	Revision of intracardiac pacemaker in heart, external approach
02H40NZ	Insertion of intracardiac pacemaker into coronary vein, open approach
02H43NZ	Insertion of intracardiac pacemaker into coronary vein, percutaneous approach

We examined claims data for procedures involving an intracardiac pacemaker reporting any of the above codes across all MS-DRGs. Our findings are shown in the following table.

<b>Intracardiac Pacemaker Procedures</b>			
<b>Across All MS-DRGs</b>	<b>Number of Cases</b>	<b>Average Length of</b>	<b>Average Costs</b>

		<b>Stay</b>	
Procedures for intracardiac pacemaker	1,190	8.6	\$38,576

We found 1,190 cases reporting a procedure involving an intracardiac pacemaker with an average length of stay of 8.6 days and average costs of \$38,576. Of these 1,190 cases, we found 1,037 cases in MS-DRGs under MDC 5. We also found that the 153 cases that grouped to MS-DRGs outside of MDC 5 grouped to surgical MS-DRGs; therefore, another O.R. procedure was also reported on the claim. However, in the FY 2019 IPPS/LTCH PPS proposed rule, we solicited public comments on whether these procedure codes describing the insertion and revision of intracardiac pacemakers should also be considered for classification into all surgical unrelated MS-DRGs outside of MDC 5 for FY 2019.

Comment: Commenters supported classifying the procedure codes listed in the table above describing the insertion and revision of intracardiac pacemakers into all surgical unrelated MS-DRGs outside of MDC 5.

Response: We appreciate the commenters’ feedback. We note that while we solicited comments on the procedure codes listed in the table above that describe the insertion of an intracardiac pacemaker device, we did not specifically recommend a change to the designation of the procedure codes at this time. We also note that, currently, the procedures are already classified within the GROUPER logic as extensive O.R. procedures. Therefore, if one of the procedure codes is reported with a principal diagnosis outside of MDC 5, the case will group to one of the unrelated surgical MS-DRGs.

After consideration of the public comments we received, we are maintaining the O.R. designation of the procedure codes listed in the above table under the ICD-10 MS-DRGs Version 36, effective October 1, 2018. As additional claims data become available, we will continue to analyze these procedures.

b. Drug-Coated Balloons in Endovascular Procedures

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38111), we discontinued new technology add-on payments for the LUTONIX<sup>®</sup> and IN.PACT<sup>™</sup> Admiral<sup>™</sup> drug-coated balloon (DCB) technologies, effective for FY 2018, because the technology no longer met the newness criterion for new technology add-on payments. For FY 2019, we received a request to reassign cases that utilize a drug-coated balloon in the performance of an endovascular procedure involving the treatment of superficial femoral arteries for peripheral arterial disease from the lower severity level MS-DRG 254 (Other Vascular Procedures without CC/MCC) and MS-DRG 253 (Other Vascular Procedures with CC) to the highest severity level MS-DRG 252 (Other Vascular Procedures with MCC). We also received a request to revise the title of MS-DRG 252 to “Other Vascular Procedures with MCC or Drug-Coated Balloon Implant”.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20205), there are currently 36 ICD-10-PCS procedure codes that describe the performance of endovascular procedures involving treatment of the superficial femoral arteries that utilize a drug-coated balloon, which are listed in the following table.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
047K041	Dilation of right femoral artery with drug-eluting intraluminal device using drug-coated balloon, open approach

ICD-10-PCS Code	Code Description
047K0D1	Dilation of right femoral artery with intraluminal device using drug-coated balloon, open approach
047K0Z1	Dilation of right femoral artery using drug-coated balloon, open approach
047K341	Dilation of right femoral artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous approach
047K3D1	Dilation of right femoral artery with intraluminal device using drug-coated balloon, percutaneous approach
047K3Z1	Dilation of right femoral artery using drug-coated balloon, percutaneous approach
047K441	Dilation of right femoral artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047K4D1	Dilation of right femoral artery with intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047K4Z1	Dilation of right femoral artery using drug-coated balloon, percutaneous endoscopic approach
047L041	Dilation of left femoral artery with drug-eluting intraluminal device using drug-coated balloon, open approach
047L0D1	Dilation of left femoral artery with intraluminal device using drug-coated balloon, open approach
047L0Z1	Dilation of left femoral artery using drug-coated balloon, open approach
047L341	Dilation of left femoral artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous approach
047L3D1	Dilation of left femoral artery with intraluminal device using drug-coated balloon, percutaneous approach
047L3Z1	Dilation of left femoral artery using drug-coated balloon, percutaneous approach
047L441	Dilation of left femoral artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047L4D1	Dilation of left femoral artery with intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047L4Z1	Dilation of left femoral artery using drug-coated balloon, percutaneous endoscopic approach
047M041	Dilation of right popliteal artery with drug-eluting intraluminal device using drug-coated balloon, open approach
047M0D1	Dilation of right popliteal artery with intraluminal device using drug-coated balloon, open approach

ICD-10-PCS Code	Code Description
047M0Z1	Dilation of right popliteal artery using drug-coated balloon, open approach
047M341	Dilation of right popliteal artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous approach
047M3D1	Dilation of right popliteal artery with intraluminal device using drug-coated balloon, percutaneous approach
047M3Z1	Dilation of right popliteal artery using drug-coated balloon, percutaneous approach
047M441	Dilation of right popliteal artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047M4D1	Dilation of right popliteal artery with intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047M4Z1	Dilation of right popliteal artery using drug-coated balloon, percutaneous endoscopic approach
047N041	Dilation of left popliteal artery with drug-eluting intraluminal device using drug-coated balloon, open approach
047N0D1	Dilation of left popliteal artery with intraluminal device using drug-coated balloon, open approach
047N0Z1	Dilation of left popliteal artery using drug-coated balloon, open approach
047N341	Dilation of left popliteal artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous approach
047N3D1	Dilation of left popliteal artery with intraluminal device using drug-coated balloon, percutaneous approach
047N3Z1	Dilation of left popliteal artery using drug-coated balloon, percutaneous approach
047N441	Dilation of left popliteal artery with drug-eluting intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047N4D1	Dilation of left popliteal artery with intraluminal device using drug-coated balloon, percutaneous endoscopic approach
047N4Z1	Dilation of left popliteal artery using drug-coated balloon, percutaneous endoscopic approach

The requestor performed its own analysis of claims data and expressed concern that it found that the average costs of cases using a drug-coated balloon in the performance of percutaneous endovascular procedures involving treatment of patients

who have been diagnosed with peripheral arterial disease are significantly higher than the average costs of all of the cases in the MS-DRGs where these procedures are currently assigned. The requestor also expressed concern that payments may no longer be adequate because the new technology add-on payments have been discontinued and may affect patient access to these procedures.

We first examined claims data from the September 2017 update of the FY 2017 MedPAR file for cases reporting any 1 of the 36 ICD-10-PCS procedure codes listed in the immediately preceding table that describe the use of a drug-coated balloon in the performance of endovascular procedures in MS-DRGs 252, 253, and 254. Our findings are shown in the following table.

<b>MS-DRGs for Other Vascular Procedures with Drug-Coated Balloon</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 252–All cases	33,583	7.6	\$23,906
MS-DRG 252–Cases with drug-coated balloon	870	8.8	\$30,912
MS-DRG 253–All cases	25,714	5.4	\$18,986
MS-DRG 253–Cases with drug-coated balloon	1,532	5.4	\$23,051
MS-DRG 254–All cases	12,344	2.8	\$13,287
MS-DRG 254–Cases with drug-coated balloon	488	2.4	\$17,445

As shown in this table, there were a total of 33,583 cases in MS-DRG 252, with an average length of stay of 7.6 days and average costs of \$23,906. There were 870 cases in MS-DRG 252 reporting the use of a drug-coated balloon in the performance of an endovascular procedure, with an average length of stay of 8.8 days and average costs of

\$30,912. The total number of cases in MS-DRG 253 was 25,714, with an average length of stay of 5.4 days and average costs of \$18,986. There were 1,532 cases in MS-DRG 253 reporting the use of a DCB in the performance of an endovascular procedure, with an average length of stay of 5.4 days and average costs of \$23,051. The total number of cases in MS-DRG 254 was 12,344, with an average length of stay of 2.8 days and average costs of \$13,287. There were 488 cases in MS-DRG 254 reporting the use of a DCB in the performance of an endovascular procedure, with an average length of stay of 2.4 days and average costs of \$17,445.

The results of our data analysis show that there is not a very high volume of cases reporting the use of a drug-coated balloon in the performance of endovascular procedures compared to all of the cases in the assigned MS-DRGs. The data results also show that the average length of stay for cases reporting the use of a drug-coated balloon in the performance of endovascular procedures in MS-DRGs 253 and 254 is lower compared to the average length of stay for all of the cases in the assigned MS-DRGs, while the average length of stay for cases reporting the use of a drug-coated balloon in the performance of endovascular procedures in MS-DRG 252 is slightly higher compared to all of the cases in MS-DRG 252 (8.8 days versus 7.6 days). Lastly, the data results showed that the average costs for cases reporting the use of a drug-coated balloon in the performance of percutaneous endovascular procedures were higher compared to all of the cases in the assigned MS-DRGs. Specifically, for MS-DRG 252, the average costs for cases reporting the use of a DCB in the performance of endovascular procedures were \$30,912 versus the average costs of \$23,906 for all cases in MS-DRG 252, a difference of

\$7,006. For MS-DRG 253, the average costs for cases reporting the use of a drug-coated balloon in the performance of endovascular procedures were \$23,051 versus the average costs of \$18,986 for all cases in MS-DRG 253, a difference of \$4,065. For MS-DRG 254, the average costs for cases reporting the use of a drug-coated balloon in the performance of endovascular procedures were \$17,445 versus the average costs of \$13,287 for all cases in MS-DRG 254, a difference of \$4,158.

The following table is a summary of the findings discussed above from our review of MS-DRGs 252, 253 and 254 and the total number of cases that used a drug-coated balloon in the performance of the procedure across MS-DRGs 252, 253, and 254.

<b>MS-DRGs for Other Vascular Procedures and Cases with Drug-Coated Balloon</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 252, 253, and 254–All cases	71,641	6.0	\$20,310
MS-DRGs 252, 253, and 254–Cases with drug-coated balloon	2,890	6.0	\$24,569

As shown in this table, there were a total of 71,641 cases across MS-DRGs 252, 253, and 254, with an average length of stay of 6.0 days and average costs of \$20,310. There were a total of 2,890 cases across MS-DRGs 252, 253, and 254 reporting the use of a drug-coated balloon in the performance of the procedure, with an average length of stay of 6.0 days and average costs of \$24,569. The data analysis showed that cases reporting the use of a drug-coated balloon in the performance of the procedure across MS-DRGs 252, 253 and 254 have similar lengths of stay (6.0 days) compared to the average length

of stay for all of the cases in MS-DRGs 252, 253, and 254. The data results also showed that the cases reporting the use of a drug-coated balloon in the performance of the procedure across these MS-DRGs have higher average costs (\$24,569 versus \$20,310) compared to the average costs for all of the cases across these MS-DRGs.

We stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20207) that the results of our claims data analysis and the advice from our clinical advisors did not support reassigning cases reporting the use of a drug-coated balloon in the performance of these procedures from the lower severity level MS-DRGs 253 and 254 to the highest severity level MS-DRG 252 at this time. We further stated that, if we were to reassign cases that utilize a drug-coated balloon in the performance of these types of procedures from MS-DRG 254 to MS-DRG 252, the cases would result in overpayment and also would have a shorter length of stay compared to all of the cases in MS-DRG 252. While the cases reporting the use of a drug-coated balloon in the performance of these procedures are higher compared to the average costs for all cases in their assigned MS-DRGs, it is not by a significant amount. We stated that we believe that as use of a drug-coated balloon becomes more common, the costs will be reflected in the data. Our clinical advisors also agreed that it would not be clinically appropriate to reassign cases for patients from the lowest severity level (without CC/MCC) MS-DRG to the highest severity level (with MCC) MS-DRG in the absence of additional data to better determine the resource utilization for this subset of patients. Therefore, for these reasons, we proposed to not reassign cases reporting the use of a drug-coated balloon in the performance of endovascular procedures from MS-DRGs 253 and 254 to MS-DRG 252.

Comment: A number of commenters supported maintaining the current classification of cases involving the use of a drug-coated balloon in the performance of endovascular procedures. The commenters stated that CMS' proposal was reasonable, given the data, ICD-10-PCS procedure codes, and information provided.

Response: We appreciate the commenters' support.

Comment: One commenter recommended that further data analysis be conducted after the new ICD-10-PCS procedure codes for endovascular procedures utilizing a drug-coated balloon in the upper extremity become effective on October 1, 2018, in order to determine if MS-DRG structure and assignment modifications are warranted in the future.

Response: We agree with the commenter that continued monitoring of the cases reporting the use of a drug-coated balloon in the performance of endovascular procedures in the lower extremity, along with analysis of the new ICD-10-PCS procedure codes that identify the use of a drug-coated balloon in the upper extremity, would be advantageous. As claims data become available, we will be able to evaluate the resource utilization of these procedures more effectively.

Comment: One commenter believed that an analysis of the average costs of cases performed with and without the use of drug-coated balloons in MS-DRGs 252, 253, and 254 justified assigning cases, including cases involving the use of drug-coated balloons in the performance of the procedure, to MS-DRGs 252 or 253, and not to MS-DRG 254. The commenter indicated that claims data showed the average costs of MS-DRG 253 for all cases is \$18,986, while the average cost of cases utilizing drug-coated balloons in the

performance of the procedure assigned to MS-DRG 254 is \$17,445. The commenter believed that, while the average length-of-stay is lower for these cases, the average costs are consistent with that of MS-DRG 253. Therefore, the commenter suggested that CMS reassign these cases to MS-DRG 253 as a more appropriate reflection of the hospital resources utilized for these cases.

Response: Our clinical advisors reviewed the data, and again determined that it would not be clinically appropriate to reassign cases for patients from the lowest severity level (without CC/MCC) MS-DRG to the higher severity level (with CC) MS-DRG in the absence of additional data to better determine the resource utilization for this subset of patients. We reiterate that we believe as use of the drug-coated balloon in the performance of endovascular procedures becomes more common, the costs will be reflected in the data. In addition, as noted above, new ICD-10-PCS procedure codes that describe the use of a drug-coated balloon in the upper extremity are effective with discharges occurring on or after October 1, 2018. As such, we will continue to monitor cases reporting the use of a drug-coated balloon in the performance of endovascular procedures and determine if future MS-DRG structure and assignment modifications are supported.

After consideration of the public comments we received, we are finalizing our proposal to not reassign cases reporting the use of a drug-coated balloon in the performance of endovascular procedures from MS-DRGs 253 and 254 to MS-DRG 252 for FY 2019.

We noted in the proposed rule that because 24 of the 36 ICD-10-PCS procedure codes describing the use of a drug-coated balloon in the performance of endovascular procedures also include the use of an intraluminal device, we conducted further analysis to determine the number of cases reporting an intraluminal device with the use of a drug-coated balloon in the performance of the procedure versus the number of cases reporting the use of a drug-coated balloon alone. We analyzed the number of cases across MS-DRGs 252, 253, and 254 reporting: (1) the use of an intraluminal device (stent) with use of a drug-coated balloon in the performance of the procedure; (2) the use of a drug-eluting intraluminal device (stent) with the use of a drug-coated balloon in the performance of the procedure; and (3) the use of a drug-coated balloon only in the performance of the procedure. Our findings are shown in the following table.

<b>MS-DRGs for Other Vascular Procedures and Cases with Drug-Coated Balloon</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 252, 253 and 254–All cases	71,641	6.0	\$20,310
MS-DRGs 252, 253 and 254–Cases with intraluminal device with drug-coated balloon	522	6.0	\$28,418
MS-DRGs 252, 253 and 254–Cases with drug-eluting intraluminal device with drug-coated balloon	447	6.0	\$26,098
MS-DRGs 252, 253 and 254–Cases with drug-coated balloon only	2,705	6.1	\$24,553

As shown in this table, there were a total of 71,641 cases across MS-DRGs 252, 253, and 254, with an average length of stay of 6.0 days and average costs of \$20,310. There were 522 cases across MS-DRGs 252, 253, and 254 reporting the use of an intraluminal device with use of a drug-coated balloon in the performance of the

procedure, with an average length of stay of 6.0 days and average costs of \$28,418.

There were 447 cases across MS-DRGs 252, 253, and 254 reporting the use of a drug-eluting intraluminal device with use of a drug-coated balloon in the performance of the procedure, with an average length of stay of 6.0 days and average costs of \$26,098.

Lastly, there were 2,705 cases across MS-DRGs 252, 253, and 254 reporting the use of a drug-coated balloon alone in the performance of the procedure, with an average length of stay of 6.1 days and average costs of \$24,553.

The data showed that the 2,705 cases in MS-DRGs 252, 253, and 254 reporting the use of a drug-coated balloon alone in the performance of the procedure have lower average costs compared to the 969 cases in MS-DRGs 252, 253, and 254 reporting the use of an intraluminal device (522 cases) or a drug-eluting intraluminal device (447 cases) with a drug-coated balloon in the performance of the procedure (\$24,553 versus \$28,418 and \$26,098, respectively.) The data also showed that the cases reporting the use of a drug-coated balloon alone in the performance of the procedure have a comparable average length of stay compared to the cases reporting the use of an intraluminal device or a drug-eluting intraluminal device with a drug-coated balloon in the performance of the procedure (6.1 days versus 6.0 days).

In summary, as we stated in the proposed rule, we believe that further analysis of endovascular procedures involving the treatment of superficial femoral arteries for peripheral arterial disease that utilize a drug-coated balloon in the performance of the procedure would be advantageous. As additional claims data become available, we will be able to more fully evaluate the differences in cases where a procedure utilizes a drug-

coated balloon alone in the performance of the procedure versus cases where a procedure utilizes an intraluminal device or a drug-eluting intraluminal device in addition to a drug-coated balloon in the performance of the procedure.

5. MDC 6 (Diseases and Disorders of the Digestive System)

a. Benign Lipomatous Neoplasm of Kidney

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20207), we received a request to reassign ICD-10-CM diagnosis code D17.71 (Benign lipomatous neoplasm of kidney) from MDC 06 (Diseases and Disorders of the Digestive System) to MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract). The requestor stated that this diagnosis code is used to describe a kidney neoplasm and believed that because the ICD-10-CM code is specific to the kidney, a more appropriate assignment would be under MDC 11. In FY 2015, under the ICD-9-CM classification, there was not a specific diagnosis code for a benign lipomatous neoplasm of the kidney. The only diagnosis code available was ICD-9-CM diagnosis code 214.3 (Lipoma of intra-abdominal organs), which was assigned to MS-DRGs 393, 394, and 395 (Other Digestive System Diagnoses with MCC, with CC, and without CC/MCC, respectively) under MDC 6. Therefore, when we converted from the ICD-9 based MS-DRGs to the ICD-10 MS-DRGs, there was not a specific code available that identified the kidney from which to replicate. As a result, ICD-10-CM diagnosis code D17.71 was assigned to those same MS-DRGs (MS-DRGs 393, 394, and 395) under MDC 6.

While reviewing the MS-DRG classification of ICD-10-CM diagnosis code D17.71, we also reviewed the MS-DRG classification of another diagnosis code

organized in subcategory D17.7, ICD-10-CM diagnosis code D17.72 (Benign lipomatous neoplasm of other genitourinary organ). ICD-10-CM diagnosis code D17.72 is currently assigned under MDC 09 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast) to MS-DRGs 606 and 607 (Minor Skin Disorders with and without MCC, respectively). Similar to the replication issue with ICD-10-CM diagnosis code D17.71, with ICD-10-CM diagnosis code D17.72, under the ICD-9-CM classification, there was not a specific diagnosis code to identify a benign lipomatous neoplasm of genitourinary organ. The only diagnosis code available was ICD-9-CM diagnosis code 214.8 (Lipoma of other specified sites), which was assigned to MS-DRGs 606 and 607 under MDC 09. Therefore, when we converted from the ICD-9 based MS-DRGs to the ICD-10 MS-DRGs, there was not a specific code available that identified another genitourinary organ (other than the kidney) from which to replicate. As a result, ICD-10-CM diagnosis code D17.72 was assigned to those same MS-DRGs (MS-DRGs 606 and 607) under MDC 9.

In the proposed rule, we proposed to reassign ICD-10-CM diagnosis code D17.71 from MS-DRGs 393, 394, and 395 (Other Digestive System Diagnoses with MCC, with CC, and without CC/MCC, respectively) under MDC 06 to MS-DRGs 686, 687, and 688 (Kidney and Urinary Tract Neoplasms with MCC, with CC, and without CC/MCC, respectively) under MDC 11 because this diagnosis code is used to describe a kidney neoplasm. We also proposed to reassign ICD-10-CM diagnosis code D17.72 from MS-DRGs 606 and 607 under MDC 09 to MS-DRGs 686, 687, and 688 under MDC 11 because this diagnosis code is used to describe other types of neoplasms classified to the

genitourinary tract that do not have a specific code identifying the site. Our clinical advisors agreed that the conditions described by the ICD-10-CM diagnosis codes provide specific anatomic detail involving the kidney and genitourinary tract and, therefore, if reclassified under this proposed MDC and reassigned to these MS-DRGs, would improve the clinical coherence of the patients assigned to these groups.

Comment: Commenters agreed with CMS' proposals to reassign ICD-10-CM diagnosis code D17.71 that describes benign lipomatous neoplasm of the kidney from MDC 6 to MDC 11, and to reassign ICD-10-CM diagnosis code D17.72 that describes benign lipomatous neoplasm of other genitourinary tract organ from MDC 9 to MDC 11. The commenters stated the proposals were reasonable, given the ICD-10-CM diagnosis codes and information provided.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposals to reassign ICD-10-CM diagnosis code D17.71 from MS-DRGs 393, 394, and 395 under MDC 6 to MS-DRGs 686, 687, and 688 under MDC 11, and to reassign ICD-10-CM diagnosis code D17.72 from MS-DRGs 606 and 607 under MDC 9 to MS-DRGs 686, 687, and 688 under MDC 11 in the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

#### b. Bowel Procedures

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20208), we received a request to reassign the following 8 ICD-10-PCS procedure codes that describe repositioning of the colon and takedown of end colostomy from MS-DRGs 344, 345, and

346 (Minor Small and Large Bowel Procedures with MCC, with CC, and without CC/MCC, respectively) to MS-DRGs 329, 330, and 331 (Major Small and Large Bowel Procedures with MCC, with CC, and without CC/MCC, respectively):

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0DSK0ZZ	Reposition ascending colon, open approach
0DKL4ZZ	Reposition ascending colon, percutaneous endoscopic approach
0DSL0ZZ	Reposition transverse colon, open approach
0DSL4ZZ	Reposition transverse colon, percutaneous endoscopic approach
0DSM0ZZ	Reposition descending colon, open approach
0DSM4ZZ	Reposition descending colon, percutaneous endoscopic approach
0DSN0ZZ	Reposition sigmoid colon, open approach
0DSN4ZZ	Reposition sigmoid colon, percutaneous endoscopic approach

The requestor indicated that the resources required for procedures identifying repositioning of specified segments of the large bowel are more closely aligned with other procedures that group to MS-DRGs 329, 330, and 331, such as repositioning of the large intestine (unspecified segment).

We analyzed the claims data from the September 2017 update of the FY 2017 Med PAR file for MS-DRGs 344, 345 and 346 for all cases reporting the 8 ICD-10-PCS procedure codes listed in the table above. Our findings are shown in the following table:

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 344--All cases	1,452	9.5	\$20,609
MS-DRG 344--All cases with a specific large bowel reposition procedure	52	9.6	\$23,409
MS-DRG 345--All cases	2,674	5.6	\$11,552
MS-DRG 345--All cases with a specific large bowel reposition	246	6	\$14,915
MS-DRG 346--All cases	990	3.8	\$8,977
MS-DRG 346--All cases with a specific large	223	4.5	\$12,279

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
bowel reposition procedure			

The data showed that the average length of stay and average costs for cases that reported a specific large bowel reposition procedure were generally consistent with the average length of stay and average costs for all of the cases in their assigned MS-DRG.

We then examined the claims data in the September 2017 update of the FY 2017 MedPAR file for MS-DRGs 329, 330 and 331. Our findings are shown in the following table.

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 329, 330, and 331--All cases	112,388	8.4	\$21,382
MS-DRG 329--All cases	33,640	13.3	\$34,015
MS-DRG 330--All cases	52,644	7.3	\$17,896
MS-DRG 331--All cases	26,104	4.1	\$12,132

As shown in this table, across MS-DRGs 329, 330, and 331, we found a total of 112,388 cases, with an average length of stay of 8.4 days and average costs of \$21,382. We stated in the FY 2019 IPPS/LTCH PPS proposed rule that the results of our analysis indicate that the resources required for cases reporting the specific large bowel repositioning procedures are more aligned with those resources required for all cases assigned to MS-DRGs 344, 345, and 346, with the average costs being lower than the average costs for all cases assigned to MS-DRGs 329, 330, and 331. Our clinical advisors also indicated that the 8 specific bowel repositioning procedures are best aligned

with those in MS-DRGs 344, 345, and 346. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20209), we proposed to maintain the current assignment of the 8 specific bowel repositioning procedures in MS-DRGs 344, 345, and 346 for FY 2019.

Comment: Commenters supported CMS’ proposal to maintain the current assignment of the 8 specific bowel repositioning procedures in MS DRGs 344, 345, and 346 for FY 2019.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing our proposal to maintain the current assignment of the 8 specific bowel repositioning procedures in MS DRGs 344, 345, and 346 for FY 2019.

In conducting our analysis of MS-DRGs 329, 330, and 331, we also examined the subset of cases reporting one of the bowel procedures listed in the following table as the only O.R. procedure.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0DQK0ZZ	Repair ascending colon, open approach
0DQK4ZZ	Repair ascending colon, percutaneous endoscopic approach
0DQL0ZZ	Repair transverse colon, open approach
0DQL4ZZ	Repair transverse colon, percutaneous endoscopic approach
0DQM0ZZ	Repair descending colon, open approach
0DQM4ZZ	Repair descending colon, percutaneous endoscopic approach
0DQN0ZZ	Repair sigmoid colon, open approach
0DQN4ZZ	Repair sigmoid colon, percutaneous endoscopic approach
0DSB0ZZ	Reposition ileum, open approach
0DSB4ZZ	Reposition ileum, percutaneous endoscopic approach
0DSE0ZZ	Reposition large intestine, open approach
0DSE4ZZ	Reposition large intestine, percutaneous endoscopic approach

This approach can be useful in determining whether resource use is truly associated with a particular procedure or whether the procedure frequently occurs in cases with other procedures with higher than average resource use. As shown in the following table, we identified 398 cases reporting a bowel procedure as the only O.R. procedure, with an average length of stay of 6.3 days and average costs of \$13,595 across MS-DRGs 329, 330, and 331, compared to the overall average length of stay of 8.4 days and average costs of \$21,382 for all cases in MS-DRGs 329, 330, and 331.

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 329, 330 and 331--All cases	112,388	8.4	\$21,382
MS-DRGs 329, 330 and 331--All cases with a bowel procedure as only O.R. procedure	398	6.3	\$13,595
MS-DRG 329--All cases	33,640	13.3	\$34,015
MS-DRG 329--Cases with a bowel procedure as only O.R. procedure	86	8.3	\$19,309
MS-DRG 330--All cases	52,644	7.3	\$17,896
MS-DRG 330--Cases with a bowel procedure as only O.R. procedure	183	6.9	\$13,617
MS-DRG 331--All cases	26,104	4.1	\$12,132
MS-DRG 331--Cases with a bowel procedure as only O.R. procedure	129	4.3	\$9,754

We stated in the FY 2019 IPPS/LTCH PPS proposed rule that the resources required for these cases are more aligned with the resources required for cases assigned to MS-DRGs 344, 345, and 346 than with the resources required for cases assigned to MS-DRGs 329, 330, and 331. Our clinical advisors also agreed that these cases are more clinically aligned with cases in MS-DRGs 344, 345, and 346, as they are minor

procedures relative to the major bowel procedures assigned to MS-DRGs 329, 330, and 331. Therefore, in the proposed rule, we proposed to reassign the 12 ICD-10-PCS procedure codes listed above from MS-DRGs 329, 330, and 331 to MS-DRGs 344, 345, and 346.

Comment: Commenters disagreed with CMS' proposal to reassign the 12 ICD-10-PCS procedure codes listed above from MS-DRGs 329, 330, and 331 to MS DRGs 344, 345, and 346. The commenters recommended that changes to these MS-DRGs be delayed until a thorough data analysis is conducted. The commenters further recommended that any future analysis include a thorough review of the principal diagnoses for cases involving these ICD-10-PCS codes, as the associated diagnosis significantly impacts the resource utilization and complexity of the procedure performed and MS-DRG assignment. The commenters noted that the root operation of "Reposition" may be used for the takedown of a stoma, as well as to treat a specific medical condition such as malrotation of the intestine, and that "Repair" is the root operation of last resort when no other ICD-10-PCS root operation applies and, therefore, is used for a wide range of procedures of varying complexity.

Commenters also noted that several questions and answers regarding these ICD-10-PCS procedure codes were published in *Coding Clinic* for ICD-10-CM/PCS between late 2016 and the end of 2017, and stated that because 2 full years of data were not available subsequent to publication of this advice, CMS' analysis and proposed MS-DRG modifications may be based on unreliable data.

Response: Upon further review, we agree with the commenters that the availability of a full 2 years of data would allow us to conduct a more comprehensive analysis upon which to consider potential modifications to these MS-DRGs. Therefore, we believe it would be preferable to wait until these data are available before finalizing changes to the MS-DRG assignment for these bowel procedures.

After consideration of the public comments we received, we are not finalizing our proposal to reassign the 12 ICD-10-PCS procedure codes listed above from MS-DRGs 329, 330, and 331 to MS-DRGs 344, 345, and 346 for FY 2019.

6. MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue): Spinal Fusion

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38036), we announced our plans to review the ICD-10 logic for the MS-DRGs where procedures involving spinal fusion are currently assigned for FY 2019. After publication of the FY 2018 IPPS/LTCH PPS final rule, we received a comment suggesting that CMS publish findings from this review and discuss possible future actions. The commenter agreed that it is important to be able to fully evaluate the MS-DRGs to which all spinal fusion procedures are currently assigned with additional claims data, particularly considering the 33 clinically invalid codes that were identified through the rulemaking process (82 FR 38034 through 38035) and the 87 codes identified from the upper and lower joint fusion tables in the ICD-10-PCS classification and discussed at the September 12, 2017 ICD-10 Coordination and Maintenance Committee that were proposed to be deleted effective October 1, 2018 (FY 2019). The agenda and handouts from that meeting can be obtained

from the CMS website at:

<https://www.cms.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/ICD-9-CM-C-and-M-Meeting-Materials.html>.

According to the commenter, deleting the 33 procedure codes describing clinically invalid spinal fusion procedures for FY 2018 partially resolves the issue for data used in setting the FY 2020 payment rates. However, the commenter also noted that the problem will not be fully resolved until the FY 2019 claims are available for FY 2021 ratesetting (due to the 87 codes identified at the ICD-10 Coordination and Maintenance Committee meeting for deletion effective October 1, 2018 (FY 2019)).

The commenter noted that it analyzed claims data from the FY 2016 MedPAR data set and was surprised to discover a significant number of discharges reporting 1 of the 87 clinically invalid codes that were identified and discussed by the ICD-10 Coordination and Maintenance Committee among the following spinal fusion MS-DRGs.

<b>MS-DRG</b>	<b>Description</b>
453	Combined Anterior/Posterior Spinal Fusion with MCC
454	Combined Anterior/Posterior Spinal Fusion with CC
455	Combined Anterior/Posterior Spinal Fusion without CC/MCC
456	Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions with MCC
457	Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions with CC
458	Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions without CC/MCC
459	Spinal Fusion Except Cervical with MCC
460	Spinal Fusion Except Cervical without MCC
471	Cervical Spinal Fusion with MCC
472	Cervical Spinal Fusion with CC
473	Cervical Spinal Fusion without CC/MCC

In addition, the commenter noted that it also identified a number of discharges for the 33 clinically invalid codes we identified in the FY 2018 IPPS/LTCH PPS final rule in the same MS-DRGs listed above. According to the commenter, its findings of these invalid spinal fusion procedure codes in the FY 2016 claims data comprise approximately 30 percent of all discharges for spinal fusion procedures.

The commenter expressed its appreciation that CMS is making efforts to address coding inaccuracies within the classification and suggested that CMS publish findings from its own review of spinal fusion coding issues in those MS-DRGs where cases reporting spinal fusion procedures are currently assigned and include a discussion of possible future actions in the FY 2019 IPPS/LTCH PPS proposed rule. The commenter believed that such an approach would allow time for stakeholder input on any possible proposals along with time for the invalid codes to be worked out of the datasets. The commenter also noted that publishing CMS' findings will put the agency, as well as the public, in a better position to address any potential payment issues for these services beginning in FY 2021.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20210), we thanked the commenter for acknowledging the steps we have taken in our efforts to address coding inaccuracies within the classification as we continue to refine the ICD-10 MS-DRGs. We did not propose any changes to the MS-DRGs involving spinal fusion procedures for FY 2019. However, in response to the commenter's suggestion and findings, we provided the following results from our analysis of the September 2017 update of the FY 2017 MedPAR claims data for the MS-DRGs involving spinal fusion procedures.

We noted that while the commenter stated that 87 codes were identified from the upper and lower joint fusion tables in the ICD-10-PCS classification and discussed at the September 12, 2017 ICD-10 Coordination and Maintenance Committee meeting to be deleted effective October 1, 2018 (FY 2019), there were 99 spinal fusion codes identified in the meeting materials, as shown in Table 6P.1g associated with the proposed rule (which is available via the Internet on the CMS website at:

<http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>).

As shown in Table 6P.1g associated with the proposed rule, the 99 procedure codes describe spinal fusion procedures that have device value “Z” representing No Device for the 6<sup>th</sup> character in the code. Because a spinal fusion procedure always requires some type of device (for example, instrumentation with bone graft or bone graft alone) to facilitate the fusion of vertebral bones, these codes are considered clinically invalid and were proposed for deletion at the September 12, 2017 ICD-10 Coordination and Maintenance Committee meeting. We received public comments in support of the proposal to delete the 99 codes describing a spinal fusion without a device, in addition to receiving support for the deletion of other procedure codes describing fusion of body sites other than the spine. A total of 213 procedure codes describing fusion of a specific body part with device value “Z” No Device are being deleted effective October 1, 2018 (FY 2019) as shown in Table 6D.--Invalid Procedure Codes associated with the proposed rule and this final rule (which is available via the Internet on the CMS website at:

<http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>).

We examined claims data from the September 2017 update of the FY 2017 MedPAR file for cases reporting any of the clinically invalid spinal fusion procedures with device value “Z” No Device in MS-DRGs 028 (Spinal Procedures with MCC), 029 (Spinal Procedures with CC or Spinal Neurostimulators), and 030 (Spinal Procedures without CC/MCC) under MDC 1 and MS-DRGs 453, 454, 455, 456, 457, 458, 459, 460, 471, 472, and 473 under MDC 8 (that are listed and shown earlier in this section). Our findings are shown in the following tables.

<b>Spinal Fusion Procedures</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 028--All cases	1,927	11.7	\$37,524
MS-DRG 028--Cases with invalid spinal fusion procedures	132	13	\$52,034
MS-DRG 029--All cases	3,426	5.7	\$22,525
MS-DRG 029--Cases with invalid spinal fusion procedures	171	7.4	\$33,668
MS-DRG 030--All cases	1,578	3	\$15,984
MS-DRG 030--Cases with invalid spinal fusion procedures	52	2.6	\$22,471
MS-DRG 453--All cases	2,891	9.5	\$70,005
MS-DRG 453--Cases with invalid spinal fusion procedures	823	10.1	\$84,829
MS-DRG 454--All cases	12,288	4.7	\$47,334
MS-DRG 454--Cases with invalid spinal fusion procedures	2,473	5.4	\$59,814
MS-DRG 455--All cases	12,751	3	\$37,440
MS-DRG 455--Cases with invalid spinal fusion procedures	2,332	3.2	\$45,888
MS-DRG 456--All cases	14,39	11.5	\$66,447
MS-DRG 456--Cases with invalid spinal fusion procedures	404	12.5	\$71,385

<b>Spinal Fusion Procedures</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 457--All cases	3,644	6	\$48,595
MS-DRG 457--Cases with invalid spinal fusion procedures	960	6.7	\$53,298
MS-DRG 458--All cases	1,368	3.6	\$37,804
MS-DRG 458--Cases with invalid spinal fusion procedures	244	4.1	\$43,182
MS-DRG 459--All cases	4,904	7.8	\$43,862
MS-DRG 459--Cases with invalid spinal fusion procedures	726	9	\$49,387
MS-DRG 460--All cases	59,459	3.4	\$29,870
MS-DRG 460--Cases with invalid spinal fusion procedures	5,311	3.9	\$31,936
MS-DRG 471--All cases	3,568	8.4	\$36,272
MS-DRG 471--Cases with invalid spinal fusion procedures	389	9.9	\$43,014
MS-DRG 472--All cases	15,414	3.2	\$21,836
MS-DRG 472--Cases with invalid spinal fusion procedures	1,270	4	\$25,780
MS-DRG 473--All cases	18,095	1.8	\$17,694
MS-DRG 473--Cases with invalid spinal fusion procedures	1,185	2.3	\$19,503

<b>Summary Table for Spinal Fusion Procedures</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 028, 029, 030, 453, 454, 455, 456, 457, 458, 459, 460, 471, 472, and 473--All cases	142,752	3.9	\$31,788
MS-DRGs 028, 029, 030, 453, 454, 455, 456, 457, 458, 459, 460, 471, 472, and 473--Cases with invalid spinal fusion procedures	16,472	5.1	\$42,929

As shown in this summary table, we found a total of 142,752 cases in MS-DRGs 028, 029, 030, 453, 454, 455, 456, 457, 458, 459, 460, 471, 472, and 473 with an average

length of stay of 3.9 days and average costs of \$31,788. We found a total of 16,472 cases reporting a procedure code for an invalid spinal fusion procedure with device value “Z” No Device across MS-DRGs 028, 029, and 030 under MDC 1 and MS-DRGs 453, 454, 455, 456, 457, 458, 459, 460, 471, 472, and 473 under MDC 8, with an average length of stay of 5.1 days and average costs of \$42,929. The results of the data analysis demonstrate that these invalid spinal fusion procedures represent approximately 12 percent of all discharges across the spinal fusion MS-DRGs. Because these procedure codes describe clinically invalid procedures, we would not expect these codes to be reported on any claims data. We stated in the proposed rule that it is unclear why providers assigned procedure codes for spinal fusion procedures with the device value “Z” No Device. Our analysis did not examine whether these claims were isolated to a specific provider or whether this inaccurate reporting was widespread among a number of providers.

With regard to possible future action, we indicated in the proposed rule that we will continue to monitor the claims data for resolution of the coding issues previously identified. Because the procedure codes that we analyzed and presented findings for in the FY 2019 IPPS/LTCH PPS proposed rule will no longer be in the classification system, effective October 1, 2018 (FY 2019), the claims data that we examine for FY 2020 may still contain claims with the invalid codes. As such, we will continue to collaborate with the AHA as one of the four Cooperating Parties through the AHA’s *Coding Clinic for ICD-10-CM/PCS* and provide further education on spinal fusion procedures and the proper reporting of the ICD-10-PCS spinal fusion procedure codes.

We agreed with the commenter that until these coding inaccuracies are no longer reflected in the claims data, it would be premature to propose any MS-DRG modifications for spinal fusion procedures. Possible MS-DRG modifications may include taking into account the approach that was utilized in performing the spinal fusion procedure (for example, open versus percutaneous).

For the reasons described and as stated in the proposed rule and earlier in our discussion, we proposed not to make any changes to the spinal fusion MS-DRGs for FY 2019.

Comment: Commenters agreed with CMS' proposal not to make any changes to the MS-DRGs involving spinal fusion procedures for FY 2019.

Response: We thank the commenters for their support.

Comment: Some commenters noted that confusion has existed as to whether a spinal fusion code may be assigned when no bone graft or bone graft substitute is used (that is, instrumentation only) but the medical record documentation refers to the procedure as a spinal fusion. One commenter recommended that additional refinements be made to the ICD-10-PCS spinal fusion coding guidelines in order to further clarify appropriate reporting of spinal fusion codes. Another commenter asserted that the planned deletion of a total of 213 ICD-10-PCS fusion procedure codes with the device value "Z" for "no device", effective October 1, 2018, should help remedy the confusion regarding the correct coding of spinal procedures.

Response: We agree with the commenters that accurate coding of spinal fusion procedures has been the subject of confusion in the past, and we will continue to monitor

the claims data for spinal fusion procedures. As one of the four Cooperating Parties, we also will continue to collaborate with the American Hospital Association to provide guidance for coding spinal fusion procedures through the Coding Clinic for ICD-10-CM/PCS publication and to review the ICD-10-PCS spinal fusion coding guidelines to determine where further clarifications may be made.

After consideration of the public comments we received, we are finalizing our proposal to not make any changes to the spinal fusion MS-DRGs for FY 2019.

7. MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast):

Cellulitis with Methicillin Resistant Staphylococcus aureus (MSRA) Infection

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20212), we received a request to reassign ICD-10-CM diagnosis codes reported with a principal diagnosis of cellulitis and a secondary diagnosis code of B95.62 (Methicillin resistant Staphylococcus aureus infection as the cause of diseases classified elsewhere) or A49.02 (Methicillin resistant Staphylococcus aureus infection, unspecified site). Currently, these cases are assigned to MS-DRG 602 (Cellulitis with MCC) and MS-DRG 603 (Cellulitis without MCC) in MDC 9. The requestor believed that cases of cellulitis with MSRA infection should be reassigned to MS-DRG 867 (Other Infectious and Parasitic Diseases Diagnoses with MCC) because MS-DRGs 602 and 603 include cases that do not accurately reflect the severity of illness or risk of mortality for patients diagnosed with cellulitis and MRSA. The requestor acknowledged that the organism is not to be coded before the localized infection, but stated in its request that patients diagnosed with cellulitis and MRSA are entirely different from patients diagnosed only with cellulitis.

The requestor stated that there is a genuine threat to life or limb in these cases. The requestor further stated that, with the opioid crisis and the frequency of MRSA infection among this population, cases of cellulitis with MRSA should be identified with a specific combination code and assigned to MS-DRG 867.

For the FY 2019 IPPS/LTCH PPS proposed rule, we analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for all cases assigned to MS-DRGs 602 and 603 and subsets of these cases reporting a principal ICD-10-CM diagnosis of cellulitis and a secondary diagnosis code of B95.62 or A49.02. Our findings are shown in the following table.

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 602--All cases	26,244	5.8	\$10,034
MS-DRG 603--All cases	104,491	3.9	\$6,128
MS-DRGs 602 and 603--Cases reported with a principal diagnosis of cellulitis and a secondary diagnosis of B95.62	5,364	5.3	\$8,245
MS-DRGs 602 and 603--Cases reported with a principal diagnosis of cellulitis and a secondary diagnosis of A49.02	309	5.4	\$8,832

As shown in this table, we examined the subsets of cases in MS-DRGs 602 and 603 reported with a principal diagnosis of cellulitis and a secondary diagnosis code B95.62 or A49.02. Both of these subsets of cases had an average length of stay that was comparable to the average length of stay for all cases in MS-DRG 602 and greater than the average length of stay for all cases in MS-DRG 603, and average costs that were lower than the average costs of all cases in MS-DRG 602 and higher than the average costs of all cases in MS-DRG 603. As we have discussed in prior rulemaking

(77 FR 53309), it is a fundamental principle of an averaged payment system that half of the procedures in a group will have above average costs. It is expected that there will be higher cost and lower cost subsets, especially when a subset has low numbers.

To examine the request to reassign ICD-10-CM diagnosis codes reported with a principal diagnosis of cellulitis and a secondary diagnosis code of B95.62 or A49.02 from MS-DRGs 602 and 603 to MS-DRG 867 (which would typically involve also reassigning those cases to the two other severity level MS-DRGs 868 and 869 (Other Infectious and Parasitic Diseases Diagnoses with CC and Other Infectious and Parasitic Diseases Diagnoses without CC/MCC, respectively)), we then analyzed the data for all cases in MS-DRGs 867, 868 and 869. The results of our analysis are shown in the following table.

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 867–All cases	2,653	7.5	\$14,762
MS-DRG 868–All cases	2,096	4.4	\$7,532
MS-DRG 869–All cases	499	3.3	\$5,624

We compared the average length of stay and average costs for MS-DRGs 867, 868, and 869 to the average length of stay and average costs for the subsets of cases in MS-DRGs 602 and 603 reported with a principal diagnosis of cellulitis and a secondary diagnosis code of B95.62 or A49.02. We found that the average length of stay for these subsets of cases was shorter and the average costs were lower than those for all cases in MS-DRG 867, but that the average length of stay and average costs were higher than those for all cases in MS-DRG 868 and MS-DRG 869. We stated in the proposed rule

that our findings from the analysis of claims data do not support reassigning cellulitis cases reported with ICD-10-CM diagnosis code B95.62 or A49.02 from MS-DRGs 602 and 603 to MS-DRGs 867, 868 and 869. Our clinical advisors noted that when a principal diagnosis of cellulitis is accompanied by a secondary diagnosis of B95.62 or A49.02 in MS-DRGs 602 or 603, the combination of these primary and secondary diagnoses is the reason for the hospitalization, and the level of acuity of these subsets of patients is similar to other patients in MS-DRGs 602 and 603. Therefore, in the proposed rule, we stated that these cases are more clinically aligned with all cases in MS-DRGs 602 and 603. For these reasons, we did not propose to reassign cellulitis cases reported with ICD-10-CM diagnosis code of B95.62 or A49.02 to MS-DRG 867, 868, or 869 for FY 2019. We invited public comments on our proposal to maintain the current MS-DRG assignment for ICD-10-CM codes B95.62 and A49.02 when reported as secondary diagnoses with a principal diagnosis of cellulitis.

Comment: One commenter supported CMS' proposal to maintain the current MS-DRG assignment for ICD-10-CM codes B95.62 and A49.02 when reported as secondary diagnoses with a principal diagnosis of cellulitis.

Response: We appreciate the commenter's support.

After consideration of the public comments we received, we are finalizing our proposal to maintain the current MS-DRG classification for cases reported with ICD-10-CM diagnosis codes B95.62 and A49.02 when reported as secondary diagnoses with a principal diagnosis of cellulitis.

8. MDC 10 (Endocrine, Nutritional and Metabolic Diseases and Disorders): Acute Intermittent Porphyria

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20212), we received a request to revise the MS-DRG classification for cases of patients diagnosed with porphyria and reported with ICD-10-CM diagnosis code E80.21 (Acute intermittent (hepatic) porphyria) to recognize the resource requirements in caring for these patients, to ensure appropriate payment for these cases, and to preserve patient access to necessary treatments. Porphyria is defined as a group of rare disorders (“porphyrias”) that interfere with the production of hemoglobin that is needed for red blood cells. While some of these disorders are genetic (inborn) and others are acquired, they all result in the abnormal accumulation of hemoglobin building blocks, called porphyrins, which can be deposited in the tissues where they particularly interfere with the functioning of the nervous system and the skin. Treatment for patients suffering from disorders of porphyrin metabolism consists of an intravenous injection of Panhematin<sup>®</sup> (hemin for injection). ICD-10-CM diagnosis code E80.21 is currently assigned to MS-DRG 642 (Inborn and Other Disorders of Metabolism). (We note that this issue has been discussed previously in the FY 2013 IPPS/LTCH PPS proposed and final rules (77 FR 27904 through 27905 and 77 FR 53311 through 53313, respectively) and the FY 2015 IPPS/LTCH PPS proposed and final rules (79 FR 28016 and 79 FR 49901, respectively)).

We analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for cases assigned to MS-DRG 642. Our findings are shown in the following table.

<b>MS-DRG 642</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 642--All cases	1,801	4.3	\$9,157
MS-DRG 642--Cases reporting diagnosis code E80.21 as principal diagnosis	183	5.6	\$19,244
MS-DRG 642--Cases not reporting diagnosis code E80.21 as principal diagnosis	1,618	4.1	\$8,016

As shown in this table, cases reporting diagnosis code E80.21 as the principal diagnosis in MS-DRG 642 had higher average costs and longer average lengths of stay compared to the average costs and lengths of stay for all other cases in MS-DRG 642.

To examine the request to reassign cases with ICD-10-CM diagnosis code E80.21 as the principal diagnosis, we analyzed claims data for all cases in MS-DRGs for endocrine disorders, including MS-DRG 643 (Endocrine Disorders with MCC), MS-DRG 644 (Endocrine Disorders with CC), and MS-DRG 645 (Endocrine Disorders without CC/MCC). The results of our analysis are shown in the following table.

<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 643--All cases	9,337	6.3	\$11,268
MS-DRG 644--All cases	11,306	4.2	\$7,154
MS-DRG 645--All cases	4,297	3.2	\$5,406

The data results showed that the average length of stay for the subset of cases reporting ICD-10-CM diagnosis code E80.21 as the principal diagnosis in MS-DRG 642 is lower than the average length of stay for all cases in MS-DRG 643, but higher than the average length of stay for all cases in MS-DRGs 644 and 645. The average costs for the subset of cases reporting ICD-10-CM diagnosis code E80.21 as the principal diagnosis in

MS-DRG 642 are much higher than the average costs for all cases in MS-DRGs 643, 644, and 645. However, after considering these findings in the context of the current MS-DRG structure, we stated in the FY 2019 IPPS/LTCH PPS proposed rule that we were unable to identify an MS-DRG that would more closely parallel these cases with respect to average costs and length of stay that would also be clinically aligned. We further stated that our clinical advisors believe that, in the current MS-DRG structure, the clinical characteristics of patients in these cases are most closely aligned with the clinical characteristics of patients in all cases in MS-DRG 642. Moreover, given the small number of porphyria cases, we do not believe there is justification for creating a new MS-DRG. Basing a new MS-DRG on such a small number of cases could lead to distortions in the relative payment weights for the MS-DRG because several expensive cases could impact the overall relative payment weight. Having larger clinical cohesive groups within an MS-DRG provides greater stability for annual updates to the relative payment weights. In summary, we did not propose to revise the MS-DRG classification for porphyria cases.

Comment: Some commenters supported CMS' proposal to maintain porphyria cases in MS-DRG 642.

Response: We appreciate the commenters' support.

Comment: Other commenters opposed CMS' proposal to not create a new MS-DRG for cases involving ICD-10-CM diagnosis code E80.21. These commenters described significant difficulties encountered by patients with acute porphyria attacks in obtaining Panhematin<sup>®</sup> when presenting to an inpatient hospital, which they attribute to

the strong financial disincentives faced by facilities to treat these cases on an inpatient basis. The commenters asserted that the inpatient stays required for management of acute porphyria attacks are not clinically similar to inpatient stays for other inborn disorders of metabolism (which comprise the cases assigned to MS-DRG 642). The commenters stated that, based on the lower than expected average cost per case and longer than expected length of stay for acute porphyria attacks, it appears that facilities are frequently not providing Panhematin<sup>®</sup> to patients in this condition, and instead attempting to provide symptom relief and transferring patients to an outpatient setting to receive the drug where they can be adequately paid. The commenters stated that this is in contrast to the standard of care for acute porphyria attacks and can result in devastating long-term health consequences. The commenters suggested that CMS consider alternative mechanisms to ensure adequate payment for cases involving rare diseases. In summary, commenters asserted that creating a new MS-DRG would allow more accurate payment for the cases that remain in MS-DRG 642 and facilitate access to the standard of care for patients with acute porphyria attacks.

Response: We acknowledge the commenters' concerns. As we have stated in prior rulemaking, it is not appropriate for facilities to deny treatment to beneficiaries needing a specific type of therapy or treatment that involves increased costs. The MS-DRG system is a system of averages and it is expected that across the diagnostic related groups that within certain groups, some cases may demonstrate higher than average costs, while other cases may demonstrate lower than average costs.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20212 through 20213), we recognize the average costs of the small number of porphyria cases are greater than the average costs of the cases in MS-DRG 642 overall. An averaged payment system depends on aggregation of similar cases with a range of costs, and it is therefore usually possible to define subsets with higher values and subsets with lower values. We seek to identify sufficiently large sets of claims data with a resource/cost similarity and clinical similarity in developing diagnostic-related groups rather than smaller subsets of diagnoses. In response to the commenters' assertion that these cases are not clinically similar to other cases within the MS-DRG, our clinical advisors continue to believe that MS-DRG 642 represents the most clinically appropriate placement within the current MS-DRG structure at this time because the clinical characteristics of patients in these cases are most closely aligned with the clinical characteristics of patients in all cases in MS-DRG 642.

We are sensitive to the commenters' concerns about access to treatment for beneficiaries who have been diagnosed with this condition. Therefore, as part of our ongoing, comprehensive analysis of the MS-DRGs under ICD-10, we will continue to explore mechanisms through which to address rare diseases and low volume DRGs. However, at this time, for the reasons summarized earlier, we are finalizing our proposal for FY 2019 to maintain the MS-DRG classification for porphyria cases.

9. MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract): Admit for Renal Dialysis

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20213 through 20214), we received a request to review the codes assigned to MS-DRG 685 (Admit for Renal Dialysis) to determine if the MS-DRG should be deleted, or if it should remain as a valid MS-DRG. Currently, the ICD-10-CM diagnosis codes shown in the table below are assigned to MS-DRG 685:

<b>ICD-10-CM Code</b>	<b>ICD-10-CM Code Title</b>
Z49.01	Encounter for fitting and adjustment of extracorporeal dialysis catheter
Z49.02	Encounter for fitting and adjustment of peritoneal dialysis catheter
Z49.31	Encounter for adequacy testing for hemodialysis
Z49.32	Encounter for adequacy testing for peritoneal dialysis

The requestor stated that, under ICD-9-CM, diagnosis code V56.0 (Encounter for extracorporeal dialysis) was reported as the principal diagnosis to identify patients who were admitted for an encounter for dialysis. However, under ICD-10-CM, there is no comparable code in which to replicate such a diagnosis. The requestor noted that, while patients continued to be admitted under inpatient status (under certain circumstances) for dialysis services, there is no existing ICD-10-CM diagnosis code within the classification that specifically identifies a patient being admitted for an encounter for dialysis services.

The requestor also noted that three of the four ICD-10-CM diagnosis codes currently assigned to MS-DRG 685 are on the “Unacceptable Principal Diagnosis” edit code list in the Medicare Code Editor (MCE). Therefore, these codes are not allowed to be reported as a principal diagnosis for an inpatient admission.

We examined claims data from the September 2017 update of the FY 2017 MedPAR file for cases reporting ICD-10-CM diagnosis codes Z49.01, Z49.02, Z49.31, and Z49.32. Our findings are shown in the following table.

<b>Admit for Renal Dialysis Encounter</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 685--All cases	78	4	\$8,871
MS-DRG 685--Cases reporting ICD-10-CM diagnosis code Z49.01	78	4	\$8,871
MS-DRG 685--Cases reporting ICD-10-CM diagnosis code Z49.02	0	0	\$0
MS-DRG 685--Cases reporting ICD-10-CM diagnosis code Z49.31	0	0	\$0
MS-DRG 685--Cases reporting ICD-10-CM diagnosis code Z49.32	0	0	\$0

As shown in the table above, for MS-DRG 685, there were a total of 78 cases reporting ICD-10-CM diagnosis code Z49.01, with an average length of stay of 4 days and average costs of \$8,871. There were no cases reporting ICD-10-CM diagnosis code Z49.02, Z49.31, or Z49.32.

Our clinical advisors reviewed the clinical issues, as well as the claims data for MS-DRG 685. Based on their review of the data analysis, our clinical advisors recommended that MS-DRG 685 be deleted and ICD-10-CM diagnosis codes Z49.01, Z49.02, Z49.31, and Z49.32 be reassigned. Historically, patients were admitted as inpatients to receive hemodialysis services. However, over time, that practice has shifted to outpatient and ambulatory settings. Because of this change in medical practice, we stated in the FY 2019 IPPS/LTCH PPS proposed rule that we did not believe that it was appropriate to maintain a vestigial MS-DRG, particularly due to the fact that the

transition to ICD-10 had resulted in three out of four codes that mapped to the MS-DRG being precluded from being used as principal diagnosis codes on the claim. In addition, our clinical advisors believed that reassigning the ICD-10-CM diagnosis codes from MS-DRG 685 to MS-DRGs 698, 699, and 700 (Other Kidney and Urinary Tract Diagnoses with MCC, with CC, and without CC\MCC, respectively) was clinically appropriate because the reassignment would result in an accurate MS-DRG assignment of a specific case or inpatient service and encounter based on acceptable principal diagnosis codes under these MS-DRGs.

Therefore, for FY 2019, because there is no existing ICD-10-CM diagnosis code within the classification system that specifically identifies a patient being admitted for an encounter for dialysis services; and three of the four ICD-10-CM diagnosis codes, Z49.02, Z49.31, and Z49.32, currently assigned to MS-DRG 685 are on the Unacceptable Principal Diagnosis edit code list in the MCE, we proposed to reassign ICD-10-CM diagnosis codes Z49.01, Z49.02, Z49.31, and Z49.32 from MS-DRG 685 to MS-DRGs 698, 699, and 700, and to delete MS-DRG 685.

Comment: Commenters agreed with the proposal to reassign ICD-10-CM diagnosis codes Z49.01, Z49.02, Z49.31, and Z49.32 from MS-DRG 685 to MS-DRGs 698, 699, and 700, and to delete MS-DRG 685.

Response: We thank the commenters for their support.

After consideration of the public comments we received, we are finalizing our proposal to delete MS-DRG 685 and reassign ICD-10-CM diagnosis codes Z49.01,

Z49.02, Z49.31, and Z49.32 from MS-DRG 685 to MS-DRGs 698, 699, and 700 for  
FY 2019, without modification.

#### 10. MDC 14 (Pregnancy, Childbirth and the Puerperium)

In the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19834) and final rule (82 FR 38036 through 38037), we noted that the MS-DRG logic involving a vaginal delivery under MDC 14 is technically complex as a result of the requirements that must be met to satisfy assignment to the affected MS-DRGs. As a result, we solicited public comments on further refinement to the following four MS-DRGs related to vaginal delivery: MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&C); MS-DRG 768 (Vaginal Delivery with O.R. Procedure Except Sterilization and/or D&C); MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis); and MS-DRG 775 (Vaginal Delivery without Complicating Diagnosis). In addition, we sought public comments on further refinements to the conditions defined as a complicating diagnosis in MS-DRG 774 and MS-DRG 781 (Other Antepartum Diagnoses with Medical Complications). We indicated that we would review public comments received in response to the solicitation as we continued to evaluate these MS-DRGs under MDC 14 and, if warranted, we would propose refinements for FY 2019. Commenters were instructed to direct comments for consideration to the CMS MS-DRG Classification Change Request Mailbox located at [MSDRGClassificationChange@cms.hhs.gov](mailto:MSDRGClassificationChange@cms.hhs.gov) by November 1, 2017.

In response to our solicitation for public comments on the MS-DRGs related to vaginal delivery, one commenter recommended that CMS convene a workgroup that would include hospital staff and physicians to systematically review the MDC 14 MS-DRGs and to identify which conditions should appropriately be considered complicating diagnoses. As an interim step, this commenter recommended that CMS

consider the following suggestions as a result of its own evaluation of MS-DRGs 767, 774 and 775.

For MS-DRG 767, the commenter recommended that the following ICD-10-CM diagnosis codes and ICD-10-PCS procedure code be removed from the GROUPER logic and provided the rationale for why the commenter suggested removing each code.

<b>Suggestions for MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&amp;C)</b>		
<b>ICD-10-CM Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 767</b>
O66.41	Failed attempted vaginal birth after previous cesarean delivery	This code indicates that the attempt at vaginal delivery has failed.
O71.00	Rupture of uterus before onset of labor, unspecified trimester	This code indicates that the uterus has ruptured before onset of labor and therefore, a vaginal delivery would not be possible.
O82	Encounter for cesarean delivery without indication	This code indicates the encounter is for a cesarean delivery.
O75.82	Onset (spontaneous) of labor after 37 weeks of gestation but before 39 completed weeks, with delivery by (planned) C-section	This code indicates this is a cesarean delivery.

<b>Suggestions for MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&amp;C)</b>		
<b>ICD-10-PCS Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 767</b>
10A07Z6	Abortion of products of conception, vacuum, via natural or artificial opening	This code indicates the procedure to be an abortion rather than a vaginal delivery.

For MS-DRG 774, the commenter recommended that the following ICD-10-CM diagnosis codes be removed from the GROUPER logic and provided the rationale for why the commenter suggested removing each code.

<b>Suggestions for MS-DRG 774 (Vaginal Delivery with Complicating Diagnoses)</b>		
<b>ICD-10-CM Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 774</b>
O66.41	Failed attempted vaginal birth after previous cesarean delivery	This code indicates that the attempt at vaginal delivery has failed.
O71.00	Rupture of uterus before onset of labor, unspecified trimester	This code indicates that the uterus has ruptured before onset of labor and therefore, a vaginal delivery would not be possible.
O75.82	Onset (spontaneous) of labor after 37 weeks of gestation but before 39 completed weeks, with delivery by (planned) C-section	This code indicates this is a planned cesarean delivery.
O82	Encounter for cesarean delivery without indication	This code indicates the encounter is for a cesarean delivery.
O80	Encounter for full-term uncomplicated delivery	According to the Official Guidelines for Coding and Reporting, "Code O80 should be assigned when a woman is admitted for a full term normal delivery and delivers a single, healthy infant without any complications antepartum, during the delivery, or postpartum during the delivery episode."

For MS-DRG 775, the commenter recommended that the following ICD-10-CM diagnosis codes and ICD-10-PCS procedure code be removed from the GROUPER logic and provided the rationale for why the commenter suggested removing each code.

<b>Suggestions for MS-DRG 775 (Vaginal Delivery without Complicating Diagnoses)</b>		
<b>ICD-10-CM Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 775</b>
O66.41	Failed attempted vaginal birth after previous cesarean delivery	This code indicates that the attempt at vaginal delivery has failed.
O69.4XX0	Labor and delivery complicated by vasa previa, not applicable or unspecified	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.
O69.4XX2	Labor and delivery complicated by vasa previa, fetus 2	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.
O69.4XX3	Labor and delivery complicated by vasa previa, fetus 3	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.
O69.4XX4	Labor and delivery complicated by vasa previa, fetus 4	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.
O69.4XX5	Labor and delivery complicated by vasa previa, fetus 5	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.
O69.4XX9	Labor and delivery complicated by vasa previa, other fetus	According to the physicians consulted, vasa previa always results in C-section. Research indicates that when vasa previa is diagnosed, C-section before labor begins can save the baby's life.

<b>Suggestions for MS-DRG 775 (Vaginal Delivery without Complicating Diagnoses)</b>		
<b>ICD-10-CM Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 775</b>
O71.00	Rupture of uterus before onset of labor, unspecified trimester	This code indicates that the uterus has ruptured before onset of labor and therefore, a vaginal delivery would not be possible.
O82	Encounter for cesarean delivery without indication	This code indicates the encounter is for a cesarean delivery.

<b>Suggestions for MS-DRG 775 (Vaginal Delivery without Complicating Diagnoses)</b>		
<b>ICD-10-PCS Code</b>	<b>Code Description</b>	<b>Rationale for Removing Code from MS-DRG 775</b>
10A07Z6	Abortion of Products of Conception, Vacuum, Via Natural or Artificial Opening	This code indicates the procedure to be an abortion rather than a vaginal delivery.

Another commenter agreed that the MS-DRG logic for a vaginal delivery under MDC 14 is technically complex and provided examples to illustrate these facts. For instance, the commenter noted that the GROUPER logic code lists appear redundant with several of the same codes listed for different MS-DRGs and that the GROUPER logic code list for a vaginal delivery in MS-DRG 774 is comprised of diagnosis codes while the GROUPER logic code list for a vaginal delivery in MS-DRG 775 is comprised of procedure codes. The commenter also noted that several of the ICD-10-CM diagnosis codes shown in the table below that became effective with discharges on and after October 1, 2016 (FY 2017) or October 1, 2017 (FY 2018) appear to be missing from the GROUPER logic code lists for MS-DRGs 781 and 774.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
O11.4	Pre-existing hypertension with pre-eclampsia, complicating childbirth

ICD-10-CM Code	Code Description
O11.5	Pre-existing hypertension with pre-eclampsia, complicating the puerperium
012.04	Gestational edema, complicating childbirth
012.05	Gestational edema, complicating the puerperium
012.14	Gestational proteinuria, complicating childbirth
012.15	Gestational proteinuria, complicating the puerperium
012.24	Gestational edema with proteinuria, complicating childbirth
012.25	Gestational edema with proteinuria, complicating the puerperium
O13.4	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating childbirth
O13.5	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating the puerperium
O14.04	Mild to moderate pre-eclampsia, complicating childbirth
O14.05	Mild to moderate pre-eclampsia, complicating the puerperium
O14.14	Severe pre-eclampsia complicating childbirth
O14.15	Severe pre-eclampsia, complicating the puerperium
O14.24	HELLP syndrome, complicating childbirth
O14.25	HELLP syndrome, complicating the puerperium
O14.94	Unspecified pre-eclampsia, complicating childbirth
O14.95	Unspecified pre-eclampsia, complicating the puerperium
O15.00	Eclampsia complicating pregnancy, unspecified trimester
O15.02	Eclampsia complicating pregnancy, second trimester
O15.03	Eclampsia complicating pregnancy, third trimester
O15.1	Eclampsia complicating labor
O15.2	Eclampsia complicating puerperium, second trimester
O16.4	Unspecified maternal hypertension, complicating childbirth
O16.5	Unspecified maternal hypertension, complicating the puerperium
O24.415	Gestational diabetes mellitus in pregnancy, controlled by oral hypoglycemic drugs
O24.425	Gestational diabetes mellitus in childbirth, controlled by oral hypoglycemic drugs
O24.435	Gestational diabetes mellitus in puerperium, controlled by oral hypoglycemic drugs
O44.20	Partial placenta previa NOS or without hemorrhage, unspecified trimester
O44.21	Partial placenta previa NOS or without hemorrhage, first trimester
O44.22	Partial placenta previa NOS or without hemorrhage, second trimester
O44.23	Partial placenta previa NOS or without hemorrhage, third trimester
O44.30	Partial placenta previa with hemorrhage, unspecified trimester
O44.31	Partial placenta previa with hemorrhage, first trimester
O44.32	Partial placenta previa with hemorrhage, second trimester

<b>ICD-10-CM Code</b>	<b>Code Description</b>
O44.33	Partial placenta previa with hemorrhage, third trimester
O44.40	Low lying placenta NOS or without hemorrhage, unspecified trimester
O44.41	Low lying placenta NOS or without hemorrhage, first trimester
O44.42	Low lying placenta NOS or without hemorrhage, second trimester
O44.43	Low lying placenta NOS or without hemorrhage, third trimester
O44.50	Low lying placenta with hemorrhage, unspecified trimester
O44.51	Low lying placenta with hemorrhage, first trimester
O44.52	Low lying placenta with hemorrhage, second trimester
O44.53	Low lying placenta with hemorrhage, third trimester
O70.20	Third degree perineal laceration during delivery, unspecified
O70.21	Third degree perineal laceration during delivery, IIIa
O70.22	Third degree perineal laceration during delivery, IIIb
O70.23	Third degree perineal laceration during delivery, IIIc
O86.11	Cervicitis following delivery
O86.12	Endometritis following delivery
O86.13	Vaginitis following delivery
O86.19	Other infection of genital tract following delivery
O86.20	Urinary tract infection following delivery, unspecified
O86.21	Infection of kidney following delivery
O86.22	Infection of bladder following delivery
O86.29	Other urinary tract infection following delivery
O86.81	Puerperal septic thrombophlebitis
O86.89	Other specified puerperal infections

Lastly, the commenter stated that the list of ICD-10-PCS procedure codes appears comprehensive, but indicated that inpatient coding is not their expertise. We note that it was not clear which list of procedure codes the commenter was specifically referencing. The commenter did not provide a list of any procedure codes for CMS to review or reference a specific MS-DRG in its comment.

Another commenter expressed concern that ICD-10-PCS procedure codes 10D17Z9 (Manual extraction of products of conception, retained, via natural or artificial opening) and 10D18Z9 (Manual extraction of products of conception, retained, via natural or artificial opening endoscopic) are not assigned to the appropriate MS-DRG.

ICD-10-PCS procedure codes 10D17Z9 and 10D18Z9 describe the manual removal of a retained placenta and are currently assigned to MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&C). According to the commenter, a patient that has a vaginal delivery with manual removal of a retained placenta is not having a sterilization or D&C procedure. The commenter noted that, under ICD-9-CM, a vaginal delivery with manual removal of retained placenta grouped to MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis) or MS-DRG 775 (Vaginal Delivery without Complicating Diagnosis). The commenter suggested CMS review these procedure codes for appropriate MS-DRG assignment under the ICD-10 MS-DRGs.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20217), we thanked the commenters and stated that we appreciated the recommendations and suggestions provided in response to our solicitation for comments on the GROUPER logic for the MS-DRGs involving a vaginal delivery or complicating diagnosis under MDC 14. With regard to the commenter who recommended that we convene a workgroup that would include hospital staff and physicians to systematically review the MDC 14 MS-DRGs and to identify which conditions should appropriately be considered complicating diagnoses, we noted that we formed an internal workgroup comprised of clinical advisors that included physicians, coding specialists, and other IPPS policy staff that assisted in our review of the GROUPER logic for a vaginal delivery and complicating diagnoses. We indicated that we also received clinical input from 3M/Health Information Systems (HIS) staff, which, under contract with CMS, is responsible for updating and maintaining the GROUPER program. We note that our analysis involved other MS-DRGs under MDC

14, in addition to those for which we specifically solicited public comments. As one of the other commenters correctly pointed out, there is redundancy, with several of the same codes listed for different MS-DRGs. Below we provide a summary of our internal analysis with responses to the commenters’ recommendations and suggestions incorporated into the applicable sections. We referred readers to the ICD-10 MS-DRG Version 35 Definitions Manual located via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending> for documentation of the GROUPER logic associated with the MDC 14 MS-DRGs to assist in the review of our discussion that follows.

We started our evaluation of the GROUPER logic for the MS-DRGs under MDC 14 by first reviewing the current concepts that exist. For example, there are “groups” for cesarean section procedures, vaginal delivery procedures, and abortions. There also are groups where no delivery occurs, and lastly, there are groups for after the delivery occurs, or the “postpartum” period. These groups are then further subdivided based on the presence or absence of complicating conditions or the presence of another procedure. We examined how we could simplify some of the older, complex GROUPER logic and remain consistent with the structure of other ICD-10 MS-DRGs. We identified the following MS-DRGs for closer review, in addition to MS-DRG 767, MS-DRG 768, MS-DRG 774, MS-DRG 775 and MS-DRG 781.

<b>MS-DRG</b>	<b>Description</b>
MS-DRG 765	Cesarean Section with CC/MCC

<b>MS-DRG</b>	<b>Description</b>
MS-DRG 766	Cesarean Section without CC/MCC
MS-DRG 769	Postpartum and Post Abortion Diagnoses with O.R. Procedure
MS-DRG 770	Abortion with D&C, Aspiration Curettage or Hysterotomy
MS-DRG 776	Postpartum and Post Abortion Diagnoses without O.R. Procedure
MS-DRG 777	Ectopic Pregnancy
MS-DRG 778	Threatened Abortion
MS-DRG 779	Abortion without D&C
MS-DRG 780	False Labor
MS-DRG 782	Other Antepartum Diagnoses without Medical Complications

The first issue we reviewed was the GROUPER logic for complicating conditions (MS-DRGs 774 and 781). Because one of the main objectives in our transition to the MS-DRGs was to better recognize the severity of illness of a patient, we believed we could structure the vaginal delivery and other MDC 14 MS-DRGs in a similar way. Therefore, we began working with the concept of vaginal delivery “with MCC, with CC and without CC/MCC” to replace the older, “complicating conditions” logic.

Next, we compared the additional GROUPER logic that exists between the vaginal delivery and the cesarean section MS-DRGs (MS-DRGs 765, 766, 767, 774, and 775). Currently, the vaginal delivery MS-DRGs take into account a sterilization procedure; however, the cesarean section MS-DRGs do not. Because a patient can have a sterilization procedure performed along with a cesarean section procedure, we adopted a working concept of “cesarean section with and without sterilization with MCC, with CC and without CC/MCC”, as well as “vaginal delivery with and without sterilization with MCC, with CC and without CC/MCC”.

We then reviewed the GROUPER logic for the MS-DRGs involving abortion and where no delivery occurs (MS-DRGs 770, 777, 778, 779, 780, and 782). We believed that we could consolidate the groups in which no delivery occurs.

Finally, we considered the GROUPER logic for the MS-DRGs related to the postpartum period (MS-DRGs 769 and 776) and determined that the structure of these MS-DRGs did not appear to require modification.

After we established those initial working concepts for the MS-DRGs discussed above, we examined the list of the ICD-10-PCS procedure codes that comprise the sterilization procedure GROUPER logic for the vaginal delivery MS-DRG 767. We identified the two manual extraction of placenta codes that the commenter had brought to our attention (ICD-10-PCS codes 10D17Z9 and 10D18Z9). We also identified two additional procedure codes, ICD-10-PCS codes 10D17ZZ (Extraction of products of conception, retained, via natural or artificial opening) and 10D18ZZ (Extraction of products of conception, retained, via natural or artificial opening endoscopic) in the list that are not sterilization procedures. Two of the four procedure codes describe manual extraction (removal) of retained placenta and the other two procedure codes describe dilation and curettage procedures. We then identified four more procedure codes in the list that do not describe sterilization procedures. ICD-10-PCS procedure codes 0UDB7ZX (Extraction of endometrium, via natural or artificial opening, diagnostic), 0UDB7ZZ (Extraction of endometrium, via natural or artificial opening), 0UDB8ZX (Extraction of endometrium, via natural or artificial opening endoscopic, diagnostic), and 0UDB8ZZ (Extraction of endometrium, via natural or artificial opening endoscopic)

describe dilation and curettage procedures that can be performed for diagnostic or therapeutic purposes. We stated in the proposed rule that we believe that these ICD-10-PCS procedure codes would be more appropriately assigned to MDC 13 (Diseases and Disorders of the Female Reproductive System) in MS-DRGs 744 and 745 (D&C, Conization, Laparoscopy and Tubal Interruption with and without CC/MCC, respectively) and, therefore, removed them from our working list of sterilization and/or D&C procedures. Because the GROUPER logic for MS-DRG 767 includes both sterilization and/or D&C, we agreed that all the other procedure codes currently included under that logic list of sterilization procedures should remain, with the exception of the two identified by the commenter. Therefore, in the proposed rule, we stated we agreed with the commenter that the manual extraction of retained placenta procedure codes should be reassigned to a more clinically appropriate vaginal delivery MS-DRG because they are not describing sterilization procedures.

Our attention then turned to other MDC 14 GROUPER logic code lists starting with the “CC for C-section” list under MS-DRGs 765 and 766 (Cesarean Section with and without CC/MCC, respectively). As noted in the proposed rule and earlier in this section, in conducting our review, we considered how we could utilize the severity level concept (with MCC, with CC, and without CC/MCC) where applicable. Consistent with this approach, we removed the “CC for C-section” logic from these MS-DRGs as part of our working concept and efforts to refine MDC 14. We determined it would be less complicated to simply allow the existing ICD-10 MS-DRG CC and MCC code list logic to apply for these MS-DRGs. Next, we reviewed the logic code lists for

“Malpresentation” and “Twins” and concluded that this logic was not necessary for the cesarean section MS-DRGs because these are describing antepartum conditions and it is the procedure of the cesarean section that determines whether or not a patient would be classified to these MS-DRGs. Therefore, those code lists were also removed for purposes of our working concept. With regard to the “Operating Room Procedure” code list, we stated in the proposed rule that we agreed there should be no changes. However, we noted that the title to ICD-10-PCS procedure code 10D00Z0 (Extraction of products of conception, classical, open approach) is being revised, effective October 1, 2018, to replace the term “classical” with “high” and ICD-10-PCS procedure code 10D00Z1 (Extraction of products of conception, low cervical, open approach) is being revised to replace the term “low cervical” to “low”. These revisions are also shown in Table 6F—Revised Procedure Code Titles associated with the proposed rule and this final rule available via the Internet on the CMS website at:

<http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

Next, we reviewed the “Delivery Procedure” and “Delivery Outcome” GROUPER logic code lists for the vaginal delivery MS-DRGs 767, 768, 774, and 775. We identified ICD-10-PCS procedure code 10A0726 (Abortion of products of conception, vacuum, via natural or artificial opening) and ICD-10-PCS procedure code 10S07ZZ (Reposition products of conception, via natural or artificial opening) under the “Delivery Procedure” code list as procedure codes that should not be included because ICD-10-PCS procedure code 10A07Z6 describes an abortion procedure and ICD-10-PCS

procedure code 10S07ZZ describes repositioning of the fetus and does not indicate a delivery took place. We also noted that, as described in the proposed rule and earlier in this discussion, a commenter recommended that ICD-10-PCS procedure code 10A07Z6 be removed from the GROUPER logic specifically for MS-DRGs 767 and 775.

Therefore, we removed these two procedure codes from the logic code list for “Delivery Procedure” in MS-DRGs 767, 768, 774, and 775. We stated in the proposed rule that we agreed with the commenter that ICD-10-PCS procedure code 10A07Z6 would be more appropriately assigned to one of the Abortion MS-DRGs. For the remaining procedures currently included in the “Delivery Procedure” code list we considered which procedures would be expected to be performed during the course of a standard, uncomplicated delivery episode versus those that would reasonably be expected to require additional resources outside of the delivery room. The list of procedure codes we reviewed is shown in the following table.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0DQP7ZZ	Repair rectum, via natural or artificial opening
0DQQ0ZZ	Repair anus, open approach
0DQQ3ZZ	Repair anus, percutaneous approach
0DQQ4ZZ	Repair anus, percutaneous endoscopic approach
0DQQ7ZZ	Repair anus, via natural or artificial opening
0DQQ8ZZ	Repair anus, via natural or artificial opening endoscopic
0DQR0ZZ	Repair anal sphincter, open approach
0DQR3ZZ	Repair anal sphincter, percutaneous approach
0DQR4ZZ	Repair anal sphincter, percutaneous endoscopic approach

While we acknowledged that these procedures may be performed to treat obstetrical lacerations as discussed in prior rulemaking (81 FR 56853), we stated that we also believe that these procedures would reasonably be expected to require a separate

operative episode and would not be performed immediately at the time of the delivery. Therefore, we removed those procedure codes describing repair of the rectum, anus, and anal sphincter shown in the table above from our working concept list of procedures to consider for a vaginal delivery. Our review of the list of diagnosis codes for the “Delivery Outcome” as a secondary diagnosis did not prompt any changes. We stated in the proposed rule we agreed that the current list of diagnosis codes continues to appear appropriate for describing the outcome of a delivery.

As the purpose of our analysis and this review was to clarify what constitutes a vaginal delivery to satisfy the ICD-10 MS-DRG logic for the vaginal delivery MS-DRGs, we believed it was appropriate to expect that a procedure code describing the vaginal delivery or extraction of “products of conception” procedure and a diagnosis code describing the delivery outcome should be reported on every claim in which a vaginal delivery occurs. This is also consistent with Section I.C.15.b.5 of the ICD-10-CM Official Guidelines for Coding and Reporting, which states “A code from category Z37, Outcome of delivery, should be included on every maternal record when a delivery has occurred. These codes are not to be used on subsequent records or on the newborn record.” Therefore, we adopted the working concept that, regardless of the principal diagnosis, if there is a procedure code describing the vaginal delivery or extraction of “products of conception” procedure and a diagnosis code describing the delivery outcome, this logic would result in assignment to a vaginal delivery MS-DRG. In the proposed rule, we noted that, as a result of this working concept, there would no longer be a need to maintain the “third condition” list under MS-DRG 774. In addition, as noted

in the proposed rule and earlier in this discussion, because we were working with the concept of vaginal delivery “with MCC, with CC, and without CC/MCC” to replace the older, “complicating conditions” logic, there would no longer be a need to maintain the “second condition” list of complicating diagnosis under MS-DRG 774.

We then reviewed the GROUPER logic code list of “Or Other O.R. procedures” (MS-DRG 768) to determine if any changes to these lists were warranted. Similar to our analysis of the procedures listed under the “Delivery Procedure” logic code list, our examination of the procedures currently described in the “Or Other O.R. procedures” procedure code list also considered which procedures would be expected to be performed during the course of a standard, uncomplicated delivery episode versus those that would reasonably be expected to require additional resources outside of the delivery room. Our analysis of all the procedures resulted in the working concept to allow all O.R. procedures to be applicable for assignment to MS-DRG 768, with the exception of the procedure codes for sterilization and/or D&C and ICD-10-PCS procedure codes 0KQM0ZZ (Repair perineum muscle, open approach) and 0UJM0ZZ (Inspection of vulva, open approach), which we determined would be reasonably expected to be performed during a standard delivery episode and, therefore, assigned to MS-DRG 774 or MS-DRG 775. We also noted that, this working concept for MS-DRG 768 would eliminate vaginal delivery cases with an O.R. procedure grouping to the unrelated MS-DRGs because all O.R. procedures would be included in the GROUPER logic procedure code list for “Or Other O.R. Procedures”.

The next set of MS-DRGs we examined more closely included MS-DRGs 777, 778, 780, 781, and 782. We believed that, because the conditions in these MS-DRGs are all describing antepartum related conditions, we could group the conditions together clinically. Diagnoses described as occurring during pregnancy and diagnoses specifying a trimester or maternal care in the absence of a delivery procedure reported were considered antepartum conditions. We also believed we could better classify these groups of patients based on the presence or absence of a procedure. Therefore, we worked with the concept of “antepartum diagnoses with and without O.R. procedure”.

As noted in the proposed rule and earlier in the discussion, we adopted a working concept of “cesarean section with and without sterilization with MCC, with CC, and without CC/MCC.” This concept is illustrated in the following table and includes our suggested modifications.

<b>Suggested Modifications to MS-DRGs for MDC 14 (Pregnancy, Childbirth and the Puerperium)</b>
<p><b>DELETE 2 MS-DRGs:</b>                      MS-DRG 765 (Cesarean Section with CC/MCC)                      MS-DRG 766 (Cesarean Section without CC/MCC)</p> <p><b>CREATE 6 MS-DRGs:</b>                      MS-DRG XXX (Cesarean Section with Sterilization with MCC)                      MS-DRG XXX (Cesarean Section with Sterilization with CC)                      MS-DRG XXX (Cesarean Section with Sterilization without CC/MCC)                      MS-DRG XXX (Cesarean Section without Sterilization with MCC)                      MS-DRG XXX (Cesarean Section without Sterilization with CC)                      MS-DRG XXX (Cesarean Section without Sterilization without CC/MCC)</p>

As shown in the table, we suggested deleting MS-DRGs 765 and 766. We also suggested creating 6 new MS-DRGs that are subdivided by a 3-way severity level split that includes “with Sterilization” and “without Sterilization”.

We also adopted a working concept of “vaginal delivery with and without sterilization with MCC, with CC, and without CC/MCC”. This concept is illustrated in the following table and includes our suggested modifications.

<b>Suggested Modifications to MS-DRGs for MDC 14 (Pregnancy, Childbirth and the Puerperium)</b>
<p><b>DELETE 3 MS-DRGs:</b>                      MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&amp;C)                      MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis)                      MS-DRG 775 (Vaginal Delivery without Complicating Diagnosis)</p> <p><b>CREATE 6 MS-DRGs:</b>                      MS-DRG XXX (Vaginal Delivery with Sterilization/D&amp;C with MCC)                      MS-DRG XXX (Vaginal Delivery with Sterilization/D&amp;C with CC)                      MS-DRG XXX (Vaginal Delivery with Sterilization/D&amp;C without CC/MCC)                      MS-DRG XXX (Vaginal Delivery without Sterilization/D&amp;C with MCC)                      MS-DRG XXX (Vaginal Delivery without Sterilization/D&amp;C with CC)                      MS-DRG XXX (Vaginal Delivery without Sterilization/D&amp;C without CC/MCC)</p>

As shown in the table, we suggested deleting MS-DRGs 767, 774, and 775. We also suggested creating 6 new MS-DRGs that are subdivided by a 3-way severity level split that includes “with Sterilization/D&C” and “without Sterilization/D&C”.

In addition, as indicated above, we believed that we could consolidate the groups in which no delivery occurs. In the proposed rule, we stated we believe that consolidating MS-DRGs where clinically coherent conditions exist is consistent with our approach to MS-DRG reclassification and our continued refinement efforts. This concept is illustrated in the following table and includes our suggested modifications.

<b>Suggested Modifications to MS-DRGs for MDC 14 (Pregnancy, Childbirth and the Puerperium)</b>
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**DELETE 5 MS-DRGs:**

MS-DRG 777 (Ectopic Pregnancy)

MS-DRG 778 (Threatened Abortion)

MS-DRG 780 (False Labor)

MS-DRG 781 (Other Antepartum Diagnoses with Medical Complications)

MS-DRG 782 (Other Antepartum Diagnoses without Medical Complications)

**CREATE 6 MS-DRGs:**

MS-DRG XXX (Other Antepartum Diagnoses with O.R. Procedure with MCC)

MS-DRG XXX (Other Antepartum Diagnoses with O.R. Procedure with CC)

MS-DRG XXX (Other Antepartum Diagnoses with O.R. Procedure without CC/MCC)

MS-DRG XXX (Other Antepartum Diagnoses without O.R. Procedure with MCC)

MS-DRG XXX (Other Antepartum Diagnoses without O.R. Procedure with CC)

MS-DRG XXX (Other Antepartum Diagnoses without O.R. Procedure without CC/MCC)

As shown in the table, we suggested deleting MS-DRGs 777, 778, 780, 781, and 782. We also suggested creating 6 new MS-DRGs that are subdivided by a 3-way severity level split that includes “with O.R. Procedure” and “without O.R. Procedure”.

Once we established each of these fundamental concepts from a clinical perspective, we were able to analyze the data to determine if our initial suggested modifications were supported.

To analyze our suggested modifications for the cesarean section and vaginal delivery MS-DRGs, we examined the claims data from the September 2017 update of the FY 2017 MedPAR file for MS-DRGs 765, 766, 767, 768, 774, and 775.

<b>MS-DRGs for MDC 14 Pregnancy, Childbirth and the Puerperium</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 765 (Cesarean Section with CC/MCC)–All cases	3,494	4.6	\$8,929
MS-DRG 766 (Cesarean Section without CC/MCC)–All cases	1,974	3.1	\$6,488
MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&C)–All cases	351	3.2	\$7,886
MS-DRG 768 (Vaginal Delivery with O.R. Procedure Except Sterilization and/or D&C)–All cases	17	6.2	\$26,164
MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis)–All cases	1,650	3.3	\$6,046
MS-DRG 775 (Vaginal Delivery without Complicating Diagnosis)–All cases	4,676	2.4	\$4,769

As shown in the table, there were a total of 3,494 cases in MS-DRG 765, with an average length of stay of 4.6 days and average costs of \$8,929. For MS-DRG 766, there were a total of 1,974 cases, with an average length of stay of 3.1 days and average costs of \$6,488. For MS-DRG 767, there were a total of 351 cases, with an average length of stay of 3.2 days and average costs of \$ 7,886. For MS-DRG 768, there were a total of 17 cases, with an average length of stay of 6.2 days and average costs of \$26,164. For MS-DRG 774, there were a total of 1,650 cases, with an average length of stay of 3.3 days and average costs of \$6,046. Lastly, for MS-DRG 775, there were a total of 4,676 cases, with an average length of stay of 2.4 days and average costs of \$4,769.

To compare and analyze the impact of our suggested modifications, we ran a simulation using the Version 35 ICD-10 MS-DRG GROUPER. The following table reflects our findings for the suggested Cesarean Section MS-DRGs with a 3-way severity level split.

<b>Suggested MS-DRGs for Cesarean Section</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 783 (Cesarean Section with Sterilization with MCC)	178	6.4	\$12,977
MS-DRG 784 (Cesarean Section with Sterilization with CC)	511	4.1	\$8,042
MS-DRG 785 (Cesarean Section with Sterilization without CC/MCC)	475	3.0	\$6,259
MS-DRG 786 (Cesarean Section without Sterilization with MCC)	707	5.9	\$11,515
MS-DRG 787 (Cesarean Section without Sterilization with CC)	1,887	4.2	\$7,990
MS-DRG 788 (Cesarean Section without Sterilization without CC/MCC)	1,710	3.3	\$6,663

As shown in the table, there were a total of 178 cases for the cesarean section with sterilization with MCC group, with an average length of stay of 6.4 days and average costs of \$12,977. There were a total of 511 cases for the cesarean section with sterilization with CC group, with an average length of stay of 4.1 days and average costs of \$8,042. There were a total of 475 cases for the cesarean section with sterilization without CC/MCC group, with an average length of stay of 3.0 days and average costs of \$6,259. For the cesarean section without sterilization with MCC group there were a total of 707 cases, with an average length of stay of 5.9 days and average costs of \$11,515. There were a total of 1,887 cases for the cesarean section without sterilization with CC group, with an average length of stay of 4.2 days and average costs of \$7,990. Lastly, there were a total of 1,710 cases for the cesarean section without sterilization without CC/MCC group, with an average length of stay of 3.3 days and average costs of \$6,663.

The following table reflects our findings for the suggested Vaginal Delivery MS-DRGs with a 3-way severity level split.

<b>Suggested MS-DRGs for Vaginal Delivery</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 796 (Vaginal Delivery with Sterilization/D&C with MCC)	25	6.7	\$11,421
MS-DRG 797 (Vaginal Delivery with Sterilization/D&C with CC)	63	2.4	\$6,065
MS-DRG 798 (Vaginal Delivery with Sterilization/D&C without CC/MCC)	126	2.3	\$6,697
MS-DRG 805 (Vaginal Delivery without Sterilization/D&C with MCC)	406	5.0	\$9,605
MS-DRG 806 (Vaginal Delivery without Sterilization/D&C with CC)	1,952	2.9	\$5,506
MS-DRG 807 (Vaginal Delivery without Sterilization/D&C without CC/MCC)	4,105	2.3	\$4,601

As shown in the table, there were a total of 25 cases for the vaginal delivery with sterilization/D&C with MCC group, with an average length of stay of 6.7 days and average costs of \$11,421. There were a total of 63 cases for the vaginal delivery with sterilization/D&C with CC group, with an average length of stay of 2.4 days and average costs of \$6,065. There were a total of 126 cases for vaginal delivery with sterilization/D&C without CC/MCC group, with an average length of stay of 2.3 days and average costs of \$6,697. There were a total of 406 cases for the vaginal delivery without sterilization/D&C with MCC group, with an average length of stay of 5.0 days and average costs of \$9,605. There were a total of 1,952 cases for the vaginal delivery without sterilization/D&C with CC group, with an average length of stay of 2.9 days and average costs of \$5,506. There were a total of 4,105 cases for the vaginal delivery

without sterilization/D&C without CC/ MCC group, with an average length of stay of 2.3 days and average costs of \$4,601.

We then reviewed the claims data from the September 2017 update of the FY 2017 MedPAR file for MS-DRGs 777, 778, 780, 781, and 782. Our findings are shown in the following table.

<b>MS-DRGs for MDC 14 Pregnancy, Childbirth and the Puerperium</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 777 (Ectopic Pregnancy)–All cases	72	1.9	\$7,149
MS-DRG 778 (Threatened Abortion)–All cases	205	2.7	\$4,001
MS-DRG 780 (False Labor)–All cases	41	2.1	\$3,045
MS-DRG 781 (Other Antepartum Diagnoses with Medical Complications)–All cases	2,333	3.7	\$5,817
MS-DRG 782 (Other Antepartum Diagnoses without Medical Complications)–All cases	70	2.1	\$3,381

As shown in the table, there were a total of 72 cases in MS-DRG 777, with an average length of stay of 1.9 days and average costs of \$7,149. For MS-DRG 778, there were a total of 205 cases, with an average length of stay of 2.7 days and average costs of \$4,001. For MS-DRG 780, there were a total of 41 cases, with an average length of stay of 2.1 days and average costs of \$3,045. For MS-DRG 781, there were a total of 2,333 cases, with an average length of stay of 3.7 days and average costs of \$5,817. Lastly, for MS-DRG 782, there were a total of 70 cases, with an average length of stay of 2.1 days and average costs of \$3,381.

To compare and analyze the impact of deleting those 5 MS-DRGs and creating 6 new MS-DRGs, we ran a simulation using the Version 35 ICD-10 MS-DRG GROUPER. Our findings below represent what we found and would expect under the suggested

modifications. The following table reflects the MS-DRGs for the suggested Other Antepartum Diagnoses MS-DRGs with a 3-way severity level split.

<b>Suggested MS-DRGs for Other Antepartum Diagnoses</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 817 (Other Antepartum Diagnoses with O.R. Procedure with MCC)	60	5.1	\$13,117
MS-DRG 818 (Other Antepartum Diagnoses with O.R. Procedure with CC)	66	4.2	\$10,483
MS-DRG 819 (Other Antepartum Diagnoses with O.R. Procedure without CC/MCC)	44	1.7	\$5,904
MS-DRG 831 (Other Antepartum Diagnoses without O.R. Procedure with MCC)	786	4.3	\$7,248
MS-DRG 832 (Other Antepartum Diagnoses without O.R. Procedure with CC)	910	3.5	\$4,994
MS-DRG 833 (Other Antepartum Diagnoses without O.R. Procedure without CC/MCC)	855	2.7	\$3,843

Our analysis of claims data from the September 2017 update of the FY 2017 MedPAR file recognized that when the criteria to create subgroups were applied for the 3-way severity level splits for the suggested MS-DRGs, those criteria were not met in all instances. For example, the criteria that there are at least 500 cases in the MCC or CC group was not met for the suggested Vaginal Delivery with Sterilization/D&C 3-way severity level split or the suggested Other Antepartum Diagnoses with O.R. Procedure 3-way severity level split.

However, as we have noted in prior rulemaking (72 FR 47152), we cannot adopt the same approach to refine the maternity and newborn MS-DRGs because of the extremely low volume of Medicare patients there are in these DRGs. While there is not a high volume of these cases represented in the Medicare data, and while we generally

advise that other payers should develop MS-DRGs to address the needs of their patients, we believe that our suggested 3-way severity level splits would address the complexity of the current MDC 14 GROUPER logic for a vaginal delivery and takes into account the new and different clinical concepts that exist under ICD-10 for this subset of patients while also maintaining the existing MS-DRG structure for identifying severity of illness, utilization of resources and complexity of service.

However, as an alternative option, we also performed analysis for a 2-way severity level split for the suggested MS-DRGs. Our findings are shown in the following tables.

<b>Suggested MS-DRGs for Cesarean Section</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG XXX (Cesarean Section with Sterilization with CC/MCC)	689	4.7	\$9,317
MS-DRG XXX (Cesarean Section with Sterilization without CC/MCC)	475	3.0	\$6,259
MS-DRG XXX (Cesarean Section without Sterilization with MCC)	2,594	4.7	\$8,951
MS-DRG XXX (Cesarean Section without Sterilization without CC/MCC)	1,710	3.3	\$6,663

<b>Suggested MS-DRGs for Vaginal Delivery</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG XXX (Vaginal Delivery with Sterilization/D&C with CC/MCC)	88	3.6	\$7,586
MS-DRG XXX (Vaginal Delivery with Sterilization/D&C without CC/MCC)	126	2.3	\$6,697
MS-DRG XXX (Vaginal Delivery without Sterilization/D&C with MCC)	2,358	3.2	\$6,212
MS-DRG XXX (Vaginal Delivery without Sterilization/D&C without CC/MCC)	4,105	2.3	\$4,601

<b>Suggested MS-DRGs for Other Antepartum Diagnoses</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG XXX (Other Antepartum Diagnoses with O.R. Procedure with MCC)	126	4.7	\$11,737
MS-DRG XXX (Other Antepartum Diagnoses with O.R. Procedure without CC/MCC)	44	1.7	\$5,904
MS-DRG XXX (Other Antepartum Diagnoses without O.R. Procedure with MCC)	1,696	3.9	\$6,039
MS-DRG XXX (Other Antepartum Diagnoses without O.R. Procedure without CC/MCC)	855	2.7	\$3,843

Similar to the analysis performed for the 3-way severity level split, we acknowledged that when the criteria to create subgroups was applied for the alternative 2-way severity level splits for the suggested MS-DRGs, those criteria were not met in all instances. For example, the suggested Vaginal Delivery with Sterilization/D&C and the Other Antepartum Diagnoses with O.R. Procedure alternative option 2-way severity level splits did not meet the criteria for 500 or more cases in the MCC or CC group.

Based on our review, which included support from our clinical advisors, and the analysis of claims data described above, in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed the deletion of 10 MS-DRGs and the creation of 18 new MS-DRGs (as shown below). This proposal was based on the approach described above, which involves consolidating specific conditions and concepts into the structure of existing logic and making additional modifications, such as adding severity levels, as part of our refinement efforts for the ICD-10 MS-DRGs. We indicated in the proposed rule that our proposals are intended to address the vaginal delivery “complicating diagnosis” logic and antepartum diagnoses with “medical complications” logic with the proposed addition of the existing and familiar severity level concept (with MCC, with CC, and without CC/MCC) to the MDC 14 MS-DRGs to provide the ability to distinguish the varying resource requirements for this subset of patients and allow the opportunity to make more meaningful comparisons with regard to severity across the MS-DRGs. We stated that our proposals, as set forth below, would also simplify the vaginal delivery procedure logic that we identified and commenters acknowledged as technically complex by eliminating the extensive diagnosis and procedure code lists for several conditions that must be met for assignment to the vaginal delivery MS-DRGs. We stated that our proposals also are intended to respond to issues identified and brought to our attention through public comments for consideration in updating the GROUPER logic code lists in MDC 14.

Specifically, we proposed to delete the following 10 MS-DRGs under MDC 14:

- MS-DRG 765 (Cesarean Section with CC/MCC);
- MS-DRG 766 (Cesarean Section without CC/MCC);

- MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&C);
- MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis);
- MS-DRG 775 (Vaginal Delivery without Complicating Diagnosis);
- MS-DRG 777 (Ectopic Pregnancy);
- MS-DRG 778 (Threatened Abortion);
- MS-DRG 780 (False Labor);
- MS-DRG 781 (Other Antepartum Diagnoses with Medical Complications); and
- MS-DRG 782 (Other Antepartum Diagnoses without Medical Complications).

We proposed to create the following new 18 MS-DRGs under MDC 14:

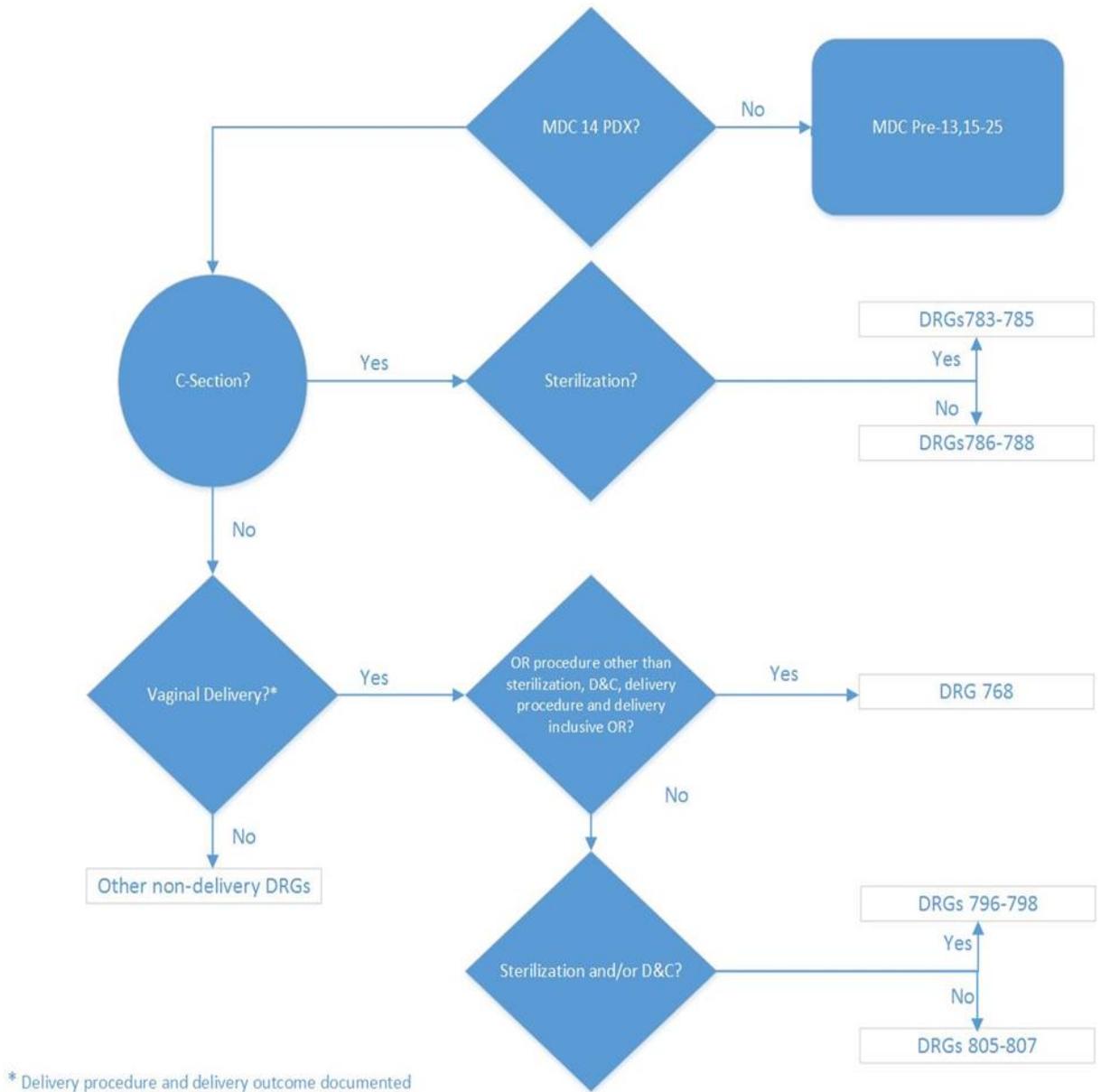
- Proposed new MS-DRG 783 (Cesarean Section with Sterilization with MCC);
- Proposed new MS-DRG 784 (Cesarean Section with Sterilization with CC);
- Proposed new MS-DRG 785 (Cesarean Section with Sterilization without CC/MCC);
- Proposed new MS-DRG 786 (Cesarean Section without Sterilization with MCC);
- Proposed new MS-DRG 787 (Cesarean Section without Sterilization with CC);
- Proposed new MS-DRG 788 (Cesarean Section without Sterilization without CC/MCC);
- Proposed new MS-DRG 796 (Vaginal Delivery with Sterilization/D&C with MCC);
- Proposed new MS-DRG 797 (Vaginal Delivery with Sterilization/D&C with CC);

- Proposed new MS-DRG 798 (Vaginal Delivery with Sterilization/D&C without CC/MCC);
- Proposed new MS-DRG 805 (Vaginal Delivery without Sterilization/D&C with MCC);
- Proposed new MS-DRG 806 (Vaginal Delivery without Sterilization/D&C with CC);
- Proposed new MS-DRG 807 (Vaginal Delivery without Sterilization/D&C without CC/MCC);
- Proposed new MS-DRG 817 (Other Antepartum Diagnoses with O.R. Procedure with MCC);
- Proposed new MS-DRG 818 (Other Antepartum Diagnoses with O.R. Procedure with CC);
- Proposed new MS-DRG 819 (Other Antepartum Diagnoses with O.R. Procedure without CC/MCC);
- Proposed new MS-DRG 831 (Other Antepartum Diagnoses without O.R. Procedure with MCC);
- Proposed new MS-DRG 832 (Other Antepartum Diagnoses without O.R. Procedure with CC); and
- Proposed new MS-DRG 833 (Other Antepartum Diagnoses without O.R. Procedure without CC/MCC).

The diagrams below illustrate how the proposed MS-DRG logic for MDC 14 would function. The first diagram (Diagram 1.) begins by asking if there is a principal

diagnosis from MDC 14. If no, the GROUPER logic directs the case to the appropriate MDC based on the principal diagnosis reported. Next, the logic asks if there is a cesarean section procedure reported on the claim. If yes, the logic asks if there was a sterilization procedure reported on the claim. If yes, the logic assigns the case to one of the proposed new MS-DRGs 783, 784, or 785. If no, the logic assigns the case to one of the proposed new MS-DRGs 786, 787, or 788. If there was not a cesarean section procedure reported on the claim, the logic asks if there was a vaginal delivery procedure reported on the claim. If yes, the logic asks if there was another O.R. procedure other than sterilization, D&C, delivery procedure or a delivery inclusive O.R. procedure. If yes, the logic assigns the case to existing MS-DRG 768. If no, the logic asks if there was a sterilization and/or D&C reported on the claim. If yes, the logic assigns the case to one of the proposed new MS-DRGs 796, 797, or 798. If no, the logic assigns the case to one of the proposed new MS-DRGs 805, 806, or 807. If there was not a vaginal delivery procedure reported on the claim, the GROUPER logic directs you to the other non-delivery MS-DRGs as shown in Diagram 2.

Diagram 1.

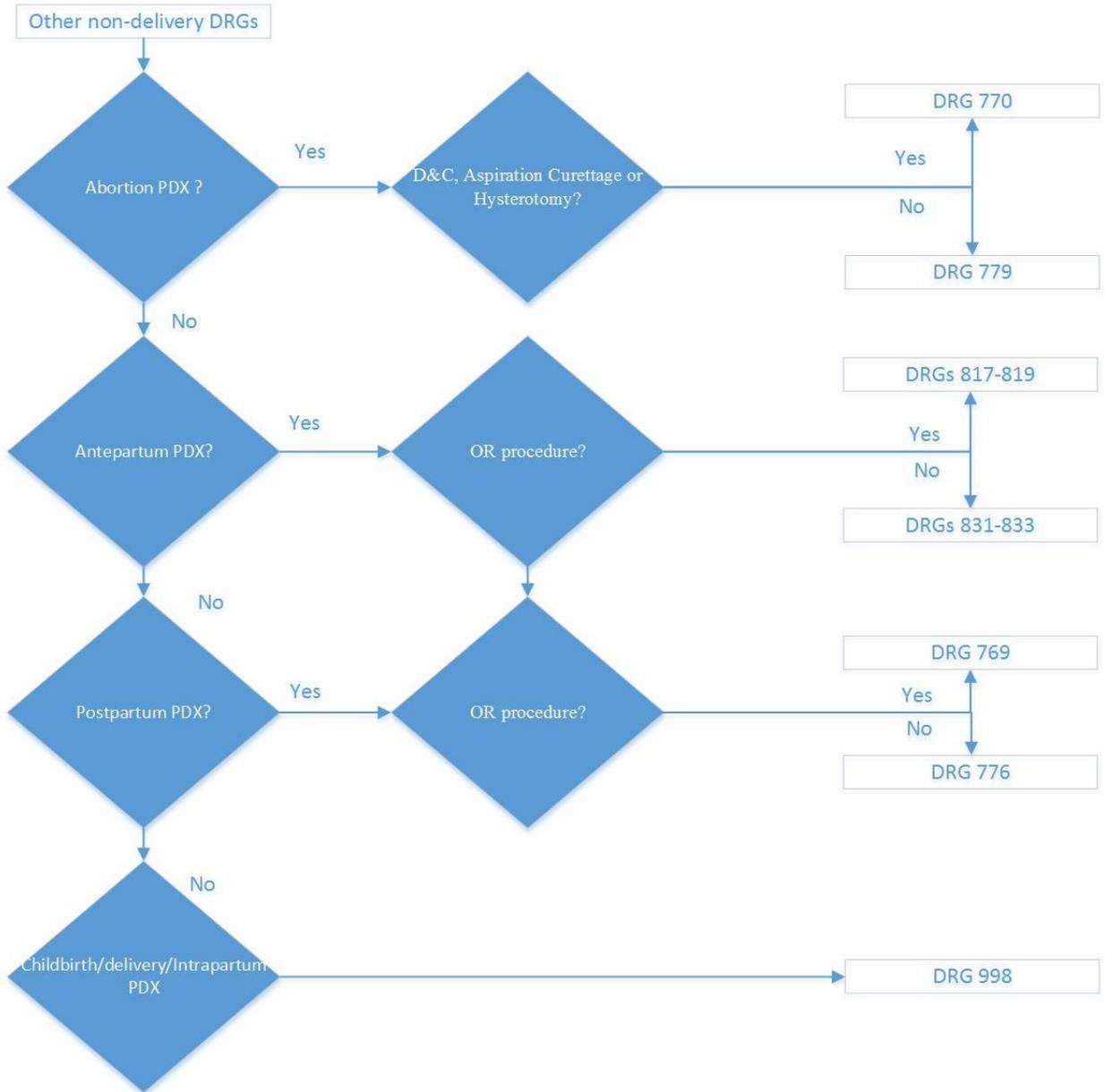


The logic for Diagram 2. begins by asking if there is a principal diagnosis of abortion reported on the claim. If yes, the logic then asks if there was a D&C, aspiration curettage or hysterotomy procedure reported on the claim. If yes, the logic assigns the case to existing MS-DRG 770. If no, the logic assigns the case to existing MS-DRG 779.

If there was not a principal diagnosis of abortion reported on the claim, the logic asks if there was a principal diagnosis of an antepartum condition reported on the claim. If yes, the logic then asks if there was an O.R. procedure reported on the claim. If yes, the logic assigns the case to one of the proposed new MS-DRGs 817, 818, or 819. If no, the logic assigns the case to one of the proposed new MS-DRGs 831, 832, or 833. If there was not a principal diagnosis of an antepartum condition reported on the claim, the logic asks if there was a principal diagnosis of a postpartum condition reported on the claim. If yes, the logic then asks if there was an O.R. procedure reported on the claim. If yes, the logic assigns the case to existing MS-DRG 769. If no, the logic assigns the case to existing MS-DRG 776. If there was not a principal diagnosis of a postpartum condition reported on the claim, the logic identifies that there was a principal diagnosis describing childbirth, delivery or an intrapartum condition reported on the claim without any other procedures, and assigns the case to existing MS-DRG 998 (Principal Diagnosis Invalid as Discharge Diagnosis).

To assist in detecting coding and MS-DRG assignment errors for MS-DRG 998 that could result when a provider does not report the procedure code for either a cesarean section or a vaginal delivery along with an outcome of delivery diagnosis code, as discussed in section II.F.13.d., we proposed to add a new Questionable Obstetric Admission edit under the MCE. We invited public comments on this proposed MCE edit and we also invited public comments on the need for any additional MCE considerations with regard to the proposed changes for the MDC 14 MS-DRGs.

Diagram 2.



We referred readers to Tables 6P.1h. through 6P.1k. associated with the proposed rule for the lists of the diagnosis and procedure codes that we proposed to assign to the GROUPER logic for the proposed new MS-DRGs and the existing MS-DRGs under MDC 14. We invited public comments on our proposed list of diagnosis codes, which

also addresses the list of diagnosis codes that a commenter identified as missing from the GROUPER logic. We noted that, as a result of our proposed GROUPER logic changes to the vaginal delivery MS-DRGs, which would only take into account the procedure codes for a vaginal delivery and the outcome of delivery secondary diagnosis codes, there is no longer a need to maintain a specific principal diagnosis logic list for those MS-DRGs. Therefore, while we appreciate the detailed suggestions and rationale submitted by the commenter for why specific diagnosis codes should be removed from the vaginal delivery principal diagnosis logic as displayed earlier in this discussion, we proposed to remove that logic. We invited public comments on this proposal, as well as our proposed list of procedure codes for the proposed revised MDC 14 MS-DRG logic, which would require a procedure code for case assignment. We also invited public comments on the proposed deletion of the 10 MS-DRGs and the proposed creation of 18 new MS-DRGs with a 3-way severity level split listed above in this section, as well as on the potential alternative new MS-DRGs using a 2-way severity level split as also presented above.

Comment: Commenters agreed with CMS' proposal to restructure the MS-DRGs within MDC 14. A few commenters commended CMS on the proposed new structure and GROUPER logic for these MS-DRGs, and believed that the new structure and logic is clearer and clinically appropriate. Another commenter agreed with the proposed new GROUPER logic for MDC 14 for deliveries with the 3-way severity level splits. The commenters anticipated that the new structure and logic will provide more clarity than the current structure.

Response: We appreciate the commenters’ support. We agree the proposed new structure and GROUPER logic of the MS-DRGs under MDC 14 will provide more clarity than the current structure and logic.

Comment: Another commenter stated that all of the diagnoses currently assigned to MS-DRG 774 (Vaginal Delivery with Complicating Diagnosis) in the GROUPER logic, along with some of the diagnoses that were noted to appear to be missing from the GROUPER logic (83 FR 20216 through 20217), should be added to the Principal Diagnosis Is Its Own CC Or MCC logic for the proposed new vaginal delivery MS-DRGs 796 (Vaginal Delivery with Sterilization/D&C with MCC), 797 (Vaginal Delivery with Sterilization/D&C with CC), 798 (Vaginal Delivery with Sterilization/D&C without CC/MCC), 805 (Vaginal Delivery without Sterilization/D&C with MCC), 806 (Vaginal Delivery without Sterilization/D&C with CC), and 807 (Vaginal Delivery without Sterilization/D&C without CC/MCC). The commenter provided the following list of diagnosis codes that were noted to appear to be missing from the GROUPER logic, and requested CMS consider adding these diagnosis codes to the Principal Diagnosis Is Its Own CC Or MCC Lists. The commenter believed that the current GROUPER logic for MS-DRG 774 includes diagnoses that could change the MS-DRG assignment of a case from MS-DRG 775 to MS-DRG 774 based on the principal diagnosis. The commenter further expressed concern that these same diagnoses may group to the proposed new MS-DRGs 798 or 807 (without CC/MCC) under the proposed new structure and GROUPER logic for the vaginal delivery MS-DRGs.

ICD-10-CM Code	Code Description
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<b>ICD-10-CM Code</b>	<b>Code Description</b>
O11.5	Pre-existing hypertension with pre-eclampsia, complicating the puerperium
012.04	Gestational edema, complicating childbirth
012.05	Gestational edema, complicating the puerperium
012.14	Gestational proteinuria, complicating childbirth
012.15	Gestational proteinuria, complicating the puerperium
012.24	Gestational edema with proteinuria, complicating childbirth
012.25	Gestational edema with proteinuria, complicating the puerperium
O13.4	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating childbirth
O13.5	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating the puerperium
O14.04	Mild to moderate pre-eclampsia, complicating childbirth
O14.05	Mild to moderate pre-eclampsia, complicating the puerperium
O14.14	Severe pre-eclampsia complicating childbirth
O14.15	Severe pre-eclampsia, complicating the puerperium
O14.24	HELLP syndrome, complicating childbirth
O14.25	HELLP syndrome, complicating the puerperium
O14.94	Unspecified pre-eclampsia, complicating childbirth
O14.95	Unspecified pre-eclampsia, complicating the puerperium
O15.00	Eclampsia complicating pregnancy, unspecified trimester
O15.02	Eclampsia complicating pregnancy, second trimester
O15.03	Eclampsia complicating pregnancy, third trimester
O15.1	Eclampsia complicating labor
O15.2	Eclampsia complicating puerperium, second trimester
O16.4	Unspecified maternal hypertension, complicating childbirth
O16.5	Unspecified maternal hypertension, complicating the puerperium

Response: As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20236 through 20239), we proposed to remove the special logic in the GROUPER for processing claims containing a diagnosis code from the Principal Diagnosis Is Its Own CC or MCC Lists. For the reasons stated in section II.F.15.c. of the preamble of this final rule, we are finalizing that proposal, and therefore this logic will no longer apply for FY 2019. We refer readers to section II.F.15.c. of the preamble of this

final rule for further discussion of the specific proposal, including summaries of the public comments we received and our responses and our statement of final policy.

With regard to the commenter's concern that the diagnosis codes listed above appear to be missing from the GROUPER logic, we note that, currently, all of the diagnoses codes are included in the MDC 14 Assignment of Diagnosis Codes List. The diagnosis codes that include the terminology "complicating the puerperium" are listed under the "Second Condition – Principal or Secondary Diagnosis" code list in the diagnosis code logic for MS-DRG 774, and the diagnosis codes that include the terminology "complicating childbirth" are listed under the "Principal Diagnosis" code list for the diagnosis code logic for MS-DRG 781 (Other Antepartum Diagnoses with Medical Complications). We acknowledge that the diagnosis codes that include the terminology "complicating childbirth" that the commenter referenced were inadvertently omitted, and are not listed in the ICD-10 MS-DRG Definitions Manual Version 35 under the diagnosis code logic list for MS-DRG 774 (or for MS-DRGs 767 (Vaginal Delivery with Sterilization and/or D&C) and 768 (Vaginal Delivery with O.R. Procedure Except Sterilization and/or D&C)). However, if one of those diagnosis codes is reported with a procedure code from the vaginal delivery code list, the ICD-10 MS-DRG GROUPER Version 35 accurately groups the case to a vaginal delivery MS-DRG.

As stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20220), in our proposal for restructuring the MDC 14 MS-DRGs under the ICD-10 MS-DRGs Version 36, diagnoses described as occurring during pregnancy and diagnoses specifying a trimester or maternal care in the absence of a delivery procedure reported are considered

anteartum conditions. Also, as shown in Table 6P.1j. associated with the proposed rule (available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service->

[Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Home-Page-Items/FY2019-](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Home-Page-Items/FY2019-)

[IPPS-Proposed-Rule-](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-)

[Tables.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Tables.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending)), we did not

propose to include any diagnosis codes describing a condition as “complicating childbirth” in the list of diagnosis codes describing anteartum conditions. Therefore, the diagnosis codes described as “complicating childbirth” would be applicable when a patient is admitted for a delivery episode and are subject to MS-DRG assignment to proposed MS-DRGs describing a cesarean or vaginal delivery.

Comment: Another commenter agreed with CMS’ initiative to restructure the MS-DRGs and GROUPER logic under MDC 14. However, the commenter expressed concerns with the proposed GROUPER logic, and requested CMS consider all of the issues prior to implementing the proposed new MS-DRGs and GROUPER logic. The commenter believed that grouping a vaginal delivery by procedure codes describing a delivery and a diagnosis code describing the outcome of delivery did not seem appropriate. The commenter stated that it is necessary to determine if a case should be assigned to a vaginal delivery MS-DRG based on the combination of principal diagnoses and procedure codes versus the combination of a procedure code with an outcome of delivery code. The commenter recommended that the first consideration should consist of identification of a principal diagnosis code within the O00-O08 code range (Pregnancy

with Abortive Outcome) and then proceeding with grouping those cases to the Abortion MS-DRGs 770 (Abortion with D&C, Aspiration Curettage or Hysterotomy) and 779 (Abortion without D&C), prior to possibly grouping the cases to the cesarean or vaginal delivery MS-DRGs. The commenter provided the example of a blighted ovum that may be treated with ICD-10-PCS procedure codes 10D07Z6 (Extraction of products of conception, vacuum, via natural or artificial opening) or 10D07Z8 (Extraction of products of conception, other, via natural or artificial opening), which are reported for vaginal deliveries.

Response: We appreciate the commenter's support for the effort to restructure the MS-DRGs and GROUPER logic under MDC 14. However, with respect to the commenter's concerns regarding the proposed new GROUPER logic for a vaginal delivery, we disagree with the commenter that it is necessary to determine if cases should be assigned to a vaginal delivery MS-DRG based on the combination of principal diagnoses and procedure codes versus the combination of a procedure code with an outcome of delivery code. One of the underlying purposes of the effort to restructure the vaginal delivery MS-DRGs was to simplify the complex logic currently associated with the vaginal delivery MS-DRGs, which includes multiple code lists for principal and secondary diagnoses. Based on the proposed new structure and GROUPER logic of the MS-DRGs under MDC 14, to identify that a vaginal delivery occurred, the logic does not have to consider or depend on the reason the patient was admitted. Rather, the GROUPER logic is structured to account for the fact that a delivery took place during that hospitalization. The delivery MS-DRGs (whether cesarean or vaginal) are

specifically intended for that reason. With regard to the example provided by the commenter, we note that ICD-10-PCS procedure codes 10D07Z6 and 10D07Z8 are designated as non-O.R. procedures that affect the MS-DRG assignment of specific MS-DRGs. ICD-10-PCS procedure codes 10D07Z6 and 10D07Z8 impact the MS-DRG assignment of the vaginal delivery MS-DRGs. However, ICD-10-CM diagnosis code O02.0 (Blighted ovum and nonhydatidiform mole) is identified as a proposed antepartum condition, as shown in Table 6P.1j, associated with the proposed rule (available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Home-Page-Items/FY2019-IPPS-Proposed-Rule-Tables.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>) and, therefore, as depicted in the commenter's example, if a patient has a principal diagnosis of a blighted ovum and either ICD-10-PCS procedure code 10D07Z6 or 10D07Z8 is reported, the proposed new GROUPER logic would result in an MS-DRG case assignment to one of the proposed new MS-DRGs 831, 832, or 833 (Other Antepartum Diagnoses without O.R. Procedure with MCC, with CC or without CC/MCC, respectively) and not a vaginal delivery MS-DRG. The diagnosis of a blighted ovum does not result in a viable pregnancy and, therefore, an outcome of delivery diagnosis code would not be reported. An illustration of how this proposed new GROUPER logic would apply for antepartum conditions was represented in Diagram 2 of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20225).

Comment: One commenter expressed concern about the proposed relative weights for several of the proposed new MS-DRGs under MDC 14. The commenter stated that the low volume of the procedures assigned to these MS-DRGs accounted for volatility in the relative weights. With regard to proposed new MS-DRGs 817, 818, and 819 (Other Antepartum Diagnoses with O.R. Procedure with MCC, CC, and without CC/MCC, respectively), the commenter stated that the proposed relative weights for these MS-DRGs are significantly lower than the proposed relative weights of the surgical MS-DRGs to which the procedure codes proposed to be assigned to these proposed new MS-DRGs would map for non-obstetrical patients. This commenter also stated that the relative weights for proposed new MS-DRGs 806 and 807 (Vaginal Delivery without Sterilization/D&C with CC and without CC/MCC, respectively) are lower than the current relative weights for MS-DRGs 774 and 775 (Vaginal Delivery with and without Complicating Diagnosis, respectively), and believed the relative weight for proposed new MS-DRG 805 (Vaginal Delivery without Sterilization/D&C with MCC) is likely inadequate for the resources required to care for patients with MCC severity level designations. The commenter suggested that CMS maintain the relative weights for proposed new MS-DRGs 806 and 807 at the same value of the current MS-DRGs, and establish a relative weight for proposed new MS-DRG 805 that is more comparable with those values of medical MS-DRGs with MCC severity level designations. The commenter further noted that the relative weights for proposed new MS-DRGs 797 and 798 (Vaginal Delivery with Sterilization/D&C with CC and without CC/MCC, respectively) are the same value, but believed the relative weight should be greater for

proposed new MS-DRG 797. The commenter also believed that the relative weight for proposed new MS-DRG 786 (Cesarean Section without Sterilization with MCC) is insufficient for the required resources necessary to perform these procedures and provide the appropriate care to patients, and requested CMS establish a relative weight with a value more consistent with values of surgical MS-DRGs with MCC severity level designations. The commenter also requested that CMS maintain the relative weights for MS-DRG 787 (Cesarean Section without Sterilization with CC) at the same value of current MS-DRG 765 (Cesarean Section with CC/MCC), and the relative weight for proposed new MS-DRG 833 (Other Antepartum Diagnoses without O.R. Procedure without CC/MCC) at the same value of current MS-DRG 782 (Other Antepartum Diagnoses without Medical Complications).

Response: It is to be expected that when MS-DRGs are restructured, resulting in a different case-mix within the new MS-DRGs, the relative weights of the MS-DRGs will change as a result. With respect to the comment about the low volume of cases, as we have noted in the proposed rule, we were unable to use our usual criterion of ensuring that there are at least 500 cases in the MCC or CC group to refine the maternity MS-DRGs because of the extremely low volume of Medicare patients cases reflected in claims data for these DRGs. While there is not a high volume of these cases represented in the Medicare data, and while we generally advise that other payers should develop MS-DRGs to address the needs of their patients, we continue to believe that the restructured MS-DRGs within MDC 14 serve important purposes to account for the new and different clinical concepts that exist under ICD-10 for this subset of patients while

also maintaining the existing MS-DRG structure for identifying severity of illness, utilization of resources, and complexity of service. We believe that even though some of the resulting MS-DRGs have relatively low volumes in the Medicare population, using our established methodology for developing DRG relative weights is the most appropriate approach for the new MS-DRGs within MDC 14. With regard to the comment about MS-DRGs 797 and 798, we note that the average cost per case for MS-DRG 797 was lower than the average cost per case for MS-DRG 798. Therefore, we blended the data for these two MS-DRGs to avoid nonmonotonicity, in which the lower severity MS-DRG has a higher relative weight than the higher severity MS-DRG. For these reasons, we are not finalizing a change to the calculation of the relative weights for the MS-DRGs under MDC 14.

After consideration of the public comments we received, we are finalizing our proposals, without modification, including the list of diagnosis codes assigned to the MS-DRGs under the restructuring of the vaginal delivery MS-DRGs under MDC 14, which we note also addresses the list of diagnosis codes that a commenter identified and were noted in the proposed rule as appearing to be missing from the GROUPER logic.

We also invited public comments on our proposal to reassign ICD-10-PCS procedure codes 0UDB7ZX, 0UDB7ZZ, 0UDB8ZX, and 0UDB8ZZ that describe dilation and curettage procedures from MS-DRG 767 under MDC 14 to MS-DRGs 744 and 745 under MDC 13.

Comment: Commenters supported CMS' proposal to reassign ICD-10-PCS procedure codes 0UDB7ZX, 0UDB7ZZ, 0UDB8ZX, and 0UDB8ZZ from MS-DRG 767 to MS-DRGs 744 and 745.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to reassign ICD-10-PCS procedure codes 0UDB7ZX, 0UDB7ZZ, 0UDB8ZX, and 0UDB8ZZ that describe dilation and curettage procedures from MS-DRG 767 under MDC 14 to MS-DRGs 744 and 745 under MDC 13 in the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

After consideration of the public comments we received, we are finalizing our proposed list of diagnosis and procedure codes for assignment to the revised MDC 14 MS-DRGs including the deletion of 10 MS-DRGs and the creation of 18 new MS-DRGs in the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

11. MDC 18 (Infectious and Parasitic Diseases (Systematic or Unspecified Sites):

Systemic Inflammatory Response Syndrome (SIRS) of Non-Infectious Origin

ICD-10-CM diagnosis codes R65.10 (Systemic Inflammatory Response Syndrome (SIRS) of non-infectious origin without acute organ dysfunction) and R65.11 (Systemic Inflammatory Response Syndrome (SIRS) of non-infectious origin with acute organ dysfunction) are currently assigned to MS-DRGs 870 (Septicemia or Severe Sepsis with Mechanical Ventilation > 96 Hours), 871 (Septicemia or Severe Sepsis with Mechanical Ventilation > 96 Hours with MCC), and 872 (Septicemia or Severe Sepsis with Mechanical Ventilation > 96 Hours without MCC) under MDC 18 (Infectious and

Parasitic Diseases, Systemic or Unspecified Sites). As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20226), our clinical advisors noted that these diagnosis codes are specifically describing conditions of a non-infectious origin, and recommended that they be reassigned to a more clinically appropriate MS-DRG.

We examined claims data from the September 2017 update of the FY 2017 MedPAR file for cases in MS-DRGs 870, 871, and 872. Our findings are shown in the following table.

<b>Septicemia or Severe Sepsis with and without Mechanical Ventilation &gt;96 Hours with and without MCC</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 870--All cases	31,658	14.3	\$42,981
MS-DRG 871--All cases	566,531	6.3	\$13,002
MS-DRG 872--All cases	150,437	4.3	\$7,532

As shown in this table, we found a total of 31,658 cases in MS-DRG 870, with an average length of stay of 14.3 days and average costs of \$42,981. We found a total of 566,531 cases in MS-DRG 871, with an average length of stay of 6.3 days and average costs of \$13,002. Lastly, we found a total of 150,437 cases in MS-DRG 872, with an average length of stay of 4.3 days and average costs of \$7,532.

We then examined claims data in MS-DRGs 870, 871, or 872 for cases reporting an ICD-10-CM diagnosis code of R65.10 or R65.11. Our findings are shown in the following table.

<b>SIRS of Non-Infectious Origin with and without Acute Organ Dysfunction</b>			
<b>MS-DRGs 870, 871 and 872</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>

<b>SIRS of Non-Infectious Origin with and without Acute Organ Dysfunction</b>			
<b>MS-DRGs 870, 871 and 872</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 870, 871, and 872--Cases reporting a principal diagnosis code of R65.10	1,254	3.8	\$6,615
MS-DRGs 870, 871, and 872--Cases reporting a principal diagnosis code of R65.11	138	4.8	\$9,655
MS-DRGs 870, 871, and 872--Cases reporting a secondary diagnosis code of R65.10	1,232	5.5	\$10,670
MS-DRGs 870, 871, and 872--Cases reporting a secondary diagnosis code of R65.11	117	6.2	\$12,525

As shown in this table, we found a total of 1,254 cases reporting a principal diagnosis code of R65.10 in MS-DRGs 870, 871, and 872, with an average length of stay of 3.8 days and average costs of \$6,615. We found a total of 138 cases reporting a principal diagnosis code of R65.11 in MS-DRGs 870, 871, and 872, with an average length of stay of 4.8 days and average costs of \$9,655. We found a total of 1,232 cases reporting a secondary diagnosis code of R65.10 in MS-DRGs 870, 871, and 872, with an average length of stay of 5.5 days and average costs of \$10,670. Lastly, we found a total of 117 cases reporting a secondary diagnosis code of R65.11 in MS-DRGs 870, 871, and 872, with an average length of stay of 6.2 days and average costs of \$12,525.

The claims data included a total of 1,392 cases in MS-DRGs 870, 871, and 872 that reported a principal diagnosis code of R65.10 or R65.11. We noted in the FY 2019 IPPS/LTCH PPS proposed rule that these 1,392 cases appear to have been coded inaccurately according to the ICD-10-CM Official Guidelines for Coding and Reporting at Section I.C.18.g., which specifically state: “The systemic inflammatory response syndrome (SIRS) can develop as a result of certain non-infectious disease processes, such

as trauma, malignant neoplasm, or pancreatitis. When SIRS is documented with a non-infectious condition, and no subsequent infection is documented, the code for the underlying condition, such as an injury, should be assigned, followed by code R65.10, Systemic inflammatory response syndrome (SIRS) of non-infectious origin without acute organ dysfunction or code R65.11, Systemic inflammatory response syndrome (SIRS) of non-infectious origin with acute organ dysfunction.” Therefore, according to the Coding Guidelines, ICD-10-CM diagnosis codes R65.10 and R65.11 should not be reported as the principal diagnosis on an inpatient claim.

We have acknowledged in past rulemaking the challenges with coding for SIRS (and sepsis) (71 FR 24037). In addition, we note that there has been confusion with regard to how these codes are displayed in the ICD-10 MS-DRG Definitions Manual under MS-DRGs 870, 871, and 872, which may also impact the reporting of these conditions. For example, in Version 35 of the ICD-10 MS-DRG Definitions Manual (which is available via the Internet on the CMS website at:

[https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending)

[Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending), the logic for case assignment to MS-DRGs 870, 871, and 872 is comprised of a list of several diagnosis codes, of which ICD-10-CM diagnosis codes R65.10 and R65.11 are included. Because these codes are listed under the heading of “Principal Diagnosis”, it may appear that these codes are to be reported as a principal diagnosis for assignment to MS-DRGs 870, 871, or 872. However, the Definitions Manual display of the GROUPER logic assignment for

each diagnosis code is for grouping purposes only. The GROUPER (and, therefore, documentation in the MS-DRG Definitions Manual) was not designed to account for coding guidelines or coverage policies. Since the inception of the IPPS, the data editing function has been a separate and independent step in the process of determining a DRG assignment. Except for extreme data integrity issues that prevent a DRG from being assigned, such as an invalid principal diagnosis, the DRG assignment GROUPER does not edit for data integrity. Prior to assigning the MS-DRG to a claim, the MACs apply a series of data integrity edits using programs such as the Medicare Code Editor (MCE). The MCE is designed to identify cases that require further review before classification into an MS-DRG. These data integrity edits address issues such as data validity, coding rules, and coverage policies. The separation of the MS-DRG grouping and data editing functions allows the MS-DRG GROUPER to remain stable during a fiscal year even though coding rules and coverage policies may change during the fiscal year. As such, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38050 through 38051), we finalized our proposal to add ICD-10-CM diagnosis codes R65.10 and R65.11 to the Unacceptable Principal Diagnosis edit in the MCE as a result of the Official Guidelines for Coding and Reporting related to SIRS, in efforts to improve coding accuracy for these types of cases.

To address the issue of determining a more appropriate MS-DRG assignment for ICD-10-CM diagnosis codes R65.10 and R65.11, we reviewed alternative options under MDC 18. Our clinical advisors determined the most appropriate option is MS-DRG 864 (Fever) because the conditions that are assigned here describe conditions of a non-infectious origin.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20227), we proposed to reassign ICD-10-CM diagnosis codes R65.10 and R65.11 to MS-DRG 864 and to revise the title of MS-DRG 864 to “Fever and Inflammatory Conditions” to better reflect the diagnoses assigned there.

<b>Proposed Revised MS-DRG 864 (Fever and Inflammatory Conditions)</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 864--All cases	12,144	3.4	\$6,232

Comment: Commenters supported the proposal to reassign ICD-10-CM diagnosis codes R65.10 and R65.11 to MS-DRG 864 and to revise the title of MS-DRG 864 to “Fever and Inflammatory Conditions”.

Response: We thank the commenters for their support.

Comment: One commenter questioned the proposed logic for ICD-10-CM diagnosis codes R65.10 and R65.11 within MS-DRG 864. The commenter noted that the diagnosis codes are included on the unacceptable principal diagnoses code edit list in the MCE and specifically inquired if cases reporting diagnosis code R65.10 or R65.11 as a secondary diagnosis would result in assignment to MS-DRG 864.

Response: The GROUPER logic assignment for each diagnosis code as a principal diagnosis is for grouping purposes only. The GROUPER was not designed to account for coding guidelines or coverage policies. The MCE is designed to identify cases that require further review before classification into an MS-DRG. Therefore, the MS-DRG logic must specifically require a condition to group based on whether it is reported as a principal diagnosis or a secondary diagnosis, and consider any procedures

that are reported, in addition to consideration of the patient's age, sex and discharge status in order to affect the MS-DRG assignment.

As noted in the ICD-10 MS-DRG Definitions Manual Version 35, Appendix B – Diagnosis Code/MDC/MS-DRG Index, each diagnosis code is listed with the MDC and the MS-DRGs to which the diagnosis is used to define the logic of the DRG either as a principal diagnosis or a secondary diagnosis. For diagnosis codes R65.10 and R65.11, the ICD-10 MS DRG Definitions Manual displays MDC 18 and MS-DRGs 870-872, as described previously. As discussed in the proposed rule, because the diagnosis are codes listed under the heading of “Principal Diagnosis” in the ICD-10 MS DRG Definitions Manual, it may appear to indicate that these codes are to be reported as a principal diagnosis for assignment to these MS-DRGs. However, the Definitions Manual display of the GROUPER logic assignment for each diagnosis code is for grouping purposes only and does not correspond to coding guidelines for reporting the principal diagnosis. In other words, cases will group according to the GROUPER logic, regardless of any coding guidelines or coverage policies. It is the MCE and other payer specific edits that identify inconsistencies in the coding guidelines or coverage policies. Under our proposed change to the ICD-10 MS-DRGs Version 36, cases reporting diagnosis code R65.10 or R65.11 as a secondary diagnosis would result in assignment to MS-DRG 864 when one of the other listed diagnosis codes in the MS-DRG 864 logic is reported as the principal diagnosis.

After consideration of the public comments we received, we are finalizing our proposal to reassign ICD-10-CM diagnosis codes R65.10 and R65.11 to MS-DRG 864 and to revise the title of MS-DRG 864 to “Fever and Inflammatory Conditions”.

#### 12. MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs): Corrosive Burns

ICD-10-CM Coding Guidelines include “Code first” sequencing instructions for cases reporting a principal diagnosis of toxic effect (ICD-10-CM codes T51 through T65) and a secondary diagnosis of corrosive burn (ICD-10-CM codes T21.40 through T21.79). As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20227), we received a request to reassign these cases from MS-DRGs 901 (Wound Debridements for Injuries with MCC), 902 (Wound Debridements for Injuries with CC), 903 (Wound Debridements for Injuries without CC/MCC), 904 (Skin Grafts for Injuries with CC/MCC), 905 (Skin Grafts for Injuries without CC/MCC), 917 (Poisoning and Toxic Effects of Drugs with MCC), and 918 (Poisoning and Toxic Effects of Drugs without MCC) to MS-DRGs 927 (Extensive Burns or Full Thickness Burns with Mechanical Ventilation > 96 Hours with Skin Graft), 928 (Full Thickness Burn with Skin Graft or Inhalation Injury with CC/MCC), 929 (Full Thickness Burn with Skin Graft or Inhalation Injury without CC/MCC), 933 (Extensive Burns or Full Thickness Burns with Mechanical Ventilation > 96 Hours without Skin Graft), 934 (Full Thickness Burn without Skin Graft or Inhalation Injury), and 935 (Nonextensive Burns).

The requestor noted that, for corrosion burns codes T21.40 through T21.79, ICD-10-CM Coding Guidelines instruct to “Code first (T51 through T65) to identify chemical and intent.” Because code first notes provide sequencing directive, when

patients are admitted with corrosive burns (which can be full thickness and extensive), toxic effect codes T51 through T65 must be sequenced first followed by codes for the corrosive burns. This causes full-thickness and extensive burns to group to MS-DRGs 901 through 905 when excisional debridement and split thickness skin grafts are performed, and to MS-DRGs 917 and 918 when procedures are not performed. This is in contrast to cases reporting a principal diagnosis of corrosive burn, which group to MS-DRGs 927 through 935.

The requestor stated that MS-DRGs 456 (Spinal Fusion except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions with MCC), 457 (Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions with CC), and 458 (Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions without CC/MCC) are grouped based on the procedure performed in combination with the principal diagnosis or secondary diagnosis (secondary scoliosis). The requestor stated that when codes for corrosive burns are reported as secondary diagnoses in conjunction with principal diagnoses codes T51 through T65, particularly when skin grafts are performed, they would be more appropriately assigned to MS-DRGs 927 through 935.

We analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for all cases assigned to MS-DRGs 901, 902, 903, 904, 905, 917, and 918, and subsets of these cases with principal diagnosis of toxic effect with secondary diagnosis of corrosive burn. We noted in the proposed rule that we found no cases from this subset in MS-DRGs 903, 907, 908, and 909 and, therefore, did not include the results

for these MS-DRGs in the table below. We also analyzed all cases assigned to MS-DRGs 927, 928, 929, 933, 934, and 935 and those cases that reported a principal diagnosis of corrosive burn. Our findings are shown in the following two tables.

<b>MDC 21 Injuries, Poisonings &amp; Toxic Effects of Drugs</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
All Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn –Across all MS-DRGs	55	5.5	\$18,077
MS-DRG 901--All cases	968	13	\$31,479
MS-DRG 901--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	1	8	\$12,388
MS-DRG 902--All cases	1,775	6.6	\$14,206
MS-DRG 902--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	8	10.3	\$20,940
MS-DRG 904--All cases	905	9.8	\$23,565
MS-DRG 904--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	8	6.4	\$22,624
MS-DRG 905--All cases	263	4.9	\$13,291
MS-DRG 905--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	2	2.5	\$7,682
MS-DRG 906--All cases	458	4.8	\$13,555
MS-DRG 906--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	1	5	\$7,409
MS-DRG 917--All cases	31,730	4.8	\$10,280
MS-DRG 917--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	6	4.8	\$7,336
MS-DRG 918--All cases	19,819	3	\$5,529
MS-DRG 918--Cases with principal diagnosis of toxic effect and secondary diagnosis of corrosive burn	28	3.5	\$5,643

As shown in this table, there were a total of 55 cases with a principal diagnosis of toxic effect and a secondary diagnosis of corrosive burn across MS-DRGs 901, 902, 903, 904, 905, 917, and 918. When comparing this subset of codes relative to those of each MS-DRG as a whole, we noted that, in most of these MS-DRGs, the average costs and average length of stay for this subset of cases were roughly equivalent to or lower than the average costs and average length of stay for cases in the MS-DRG as a whole, while in one case, they were higher. As we have noted in prior rulemaking (77 FR 53309) and elsewhere in the proposed rule and this final rule, it is a fundamental principle of an averaged payment system that half of the procedures in a group will have above average costs. It is expected that there will be higher cost and lower cost subsets, especially when a subset has low numbers. We stated in the proposed rule that the results of this analysis indicate that these cases are appropriately placed within their current MDC.

Our clinical advisors reviewed this request and indicated that patients with a principal diagnosis of toxic effect and a secondary diagnosis of corrosive burn have been exposed to an irritant or corrosive substance and, therefore, are clinically similar to those patients in MDC 21. Furthermore, our clinical advisors did not believe that the size of this subset of cases justifies the significant changes to the GROUPER logic that would be required to address the commenter’s request, which would involve rerouting cases when the primary and secondary diagnoses are in different MDCs.

<b>MDC 22 Burns</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>

All cases with principal diagnosis of corrosive burn – Across all MS-DRGs	60	8.5	\$19,456
MS-DRG 927--All cases	159	28.1	\$128,960
MS-DRG 927--Cases with principal diagnosis of corrosive burn	1	41	\$75,985
MS-DRG 928--All cases	1,021	15.1	\$42,868
MS-DRG 928--Cases with principal diagnosis of corrosive burn	13	13.2	\$31,118
MS-DRG 929--All cases	295	7.9	\$21,600
MS-DRG 929--Cases with principal diagnosis of corrosive burn	4	12.5	\$18,527
MS-DRG 933--All cases	121	4.6	\$21,291
MS-DRG 933--Cases with principal diagnosis of corrosive burn	1	7	\$91,779
MS-DRG 934--All cases	503	6.1	\$13,286
MS-DRG 934--Cases with principal diagnosis of corrosive burn	11	5.8	\$13,280
MS-DRG 935--All cases	1,705	5.2	\$13,065
MS-DRG 935--Cases with principal diagnosis of corrosive burn	29	5	\$9,822

To address the request of reassigning cases with a principal diagnosis of toxic effect and secondary diagnosis of corrosive burn, we reviewed the data for all cases in MS-DRGs 927, 928, 929, 933, 934, and 935 and those cases reporting a principal diagnosis of corrosive burn. We found a total of 60 cases reporting a principal diagnosis of corrosive burn, with an average length of stay of 8.5 days and average costs of \$19,456. We stated in the proposed rule that our clinical advisors believe that these cases reporting a principal diagnosis of corrosive burn are appropriately placed in MDC 22 as they are clinically aligned with other patients in this MDC. We further stated that, in summary, the results of our claims data analysis and the advice from our clinical advisors do not support reassigning cases in MS-DRGs 901, 902, 903, 904, 905, 917, and 918 reporting a principal diagnosis of toxic effect and a secondary diagnosis of corrosive burn

to MS-DRGs 927, 928, 929, 933, 934 and 935. Therefore, we did not propose to reassign these cases.

Comment: One commenter supported the proposal to maintain the current MS-DRG structure for cases reporting a principal diagnosis of toxic effect (ICD-10-CM codes T51 through T65) and a secondary diagnosis of corrosive burn (ICD-10-CM codes T21.40 through T21.79). Another commenter suggested that the 60 identified cases that CMS used in its analysis were incorrectly coded. The commenter noted that ICD-10-CM coding guidelines under each code for corrosion burn state “Code first (T51 -T65) to identify chemical and intent.” The commenter stated that corrosive burns cannot be sequenced as the principal diagnosis because the coding guidelines must be followed. The commenter stated that the toxic effect codes T51 - T65 must be sequenced first, which causes these cases to group to MS-DRGs 901 through 905 and 917 and 918 instead of the more appropriate burn MS-DRGs. The commenter stated that it appears that when codes T51-T65 are the principal diagnosis, the cases group to MDC 21 (Injuries, Poisoning, and Toxic Effects of Drugs), and then to MS-DRGs 901 through 905 and 917 and 918.

Response: We appreciate the commenter’s support. With regard to the commenter who raised concerns about the coding guidelines and display of codes in the ICD-10 MS-DRG Definitions Manual, we note that the GROUPER logic was not designed to account for coding guidelines. With regard to the display of code lists in the ICD-10 MS-DRG Definitions Manual, the MS-DRG logic must specifically require a condition to group based on whether it is reported as a principal diagnosis or a secondary

diagnosis and consider any procedures that are reported in order to affect the MS-DRG assignment. However, as stated previously, the Grouper logic is not dependent on coding guidelines. The purpose of the Grouper is to group cases into particular MS-DRGs. We recognize that, over time, the desire to create or modify existing Grouper logic in response to coding guidelines has become more common. As we continue our efforts to refine the ICD-10 MS-DRGs, we will consider alternate approaches to ensure the integrity of both the Grouper logic and coding guidelines. Based on the data available at this time, we do not believe that it is appropriate to change the MS-DRG assignment for the procedures identifying corrosive burns identified earlier.

After consideration of the public comments we received, we are finalizing our proposal to maintain the current MS-DRG structure for cases reporting a principal diagnosis of toxic effect (ICD-10-CM codes T51 through T65) and a secondary diagnosis of corrosive burn (ICD-10-CM codes T21.40 through T21.79).

### 13. Changes to the Medicare Code Editor (MCE)

The Medicare Code Editor (MCE) is a software program that detects and reports errors in the coding of Medicare claims data. Patient diagnoses, procedure(s), and demographic information are entered into the Medicare claims processing systems and are subjected to a series of automated screens. The MCE screens are designed to identify cases that require further review before classification into an MS-DRG.

As discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38045), we made available the FY 2018 ICD-10 MCE Version 35 manual file. The link to this MCE manual file, along with the link to the mainframe and computer software for the MCE

Version 35 (and ICD-10 MS-DRGs) are posted on the CMS website at

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service->

[Payment/AcuteInpatientPPS/index.html](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html) through the FY 2018 IPPS Final Rule Home Page.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20229), we addressed the MCE requests we received by the November 1, 2017 deadline. We also discussed the proposals we were making based on our internal review and analysis. In this FY 2019 IPPS/LTCH PPS final rule, we present a summation of the comments we received in response to the MCE requests and proposals presented based on internal reviews and analyses in the proposed rule, our responses to those comments, and our finalized policies.

In addition, as a result of new and modified code updates approved after the annual spring ICD-10 Coordination and Maintenance Committee meeting, we routinely make changes to the MCE. In the past, in both the IPPS proposed and final rules, we only provided the list of changes to the MCE that were brought to our attention after the prior year's final rule. We historically have not listed the changes we have made to the MCE as a result of the new and modified codes approved after the annual spring ICD-10 Coordination and Maintenance Committee meeting. These changes are approved too late in the rulemaking schedule for inclusion in the proposed rule. Furthermore, although our MCE policies have been described in our proposed and final rules, we have not provided the detail of each new or modified diagnosis and procedure code edit in the final rule. However, we make available the finalized Definitions of Medicare Code Edits (MCE)

file. Therefore, we are making available the FY 2019 ICD-10 MCE Version 36 Manual file, along with the link to the mainframe and computer software for the MCE Version 36 (and ICD-10 MS DRGs), on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software.html>.

a. Age Conflict Edit

In the MCE, the Age Conflict edit exists to detect inconsistencies between a patient's age and any diagnosis on the patient's record; for example, a 5-year-old patient with benign prostatic hypertrophy or a 78-year-old patient coded with a delivery. In these cases, the diagnosis is clinically and virtually impossible for a patient of the stated age. Therefore, either the diagnosis or the age is presumed to be incorrect. Currently, in the MCE, the following four age diagnosis categories appear under the Age Conflict edit and are listed in the manual and written in the software program:

- Perinatal/Newborn - Age of 0 years only; a subset of diagnoses which will only occur during the perinatal or newborn period of age 0 (for example, tetanus neonatorum, health examination for newborn under 8 days old).
- Pediatric - Age is 0–17 years inclusive (for example, Reye's syndrome, routine child health exam).
- Maternity - Age range is 12–55 years inclusive (for example, diabetes in pregnancy, antepartum pulmonary complication).
- Adult - Age range is 15–124 years inclusive (for example, senile delirium, mature cataract).

(1) Perinatal/Newborn Diagnoses Category

Under the ICD-10 MCE, the Perinatal/Newborn Diagnoses category under the Age Conflict edit considers the age of 0 years only; a subset of diagnoses which will only occur during the perinatal or newborn period of age 0 to be inclusive. This includes conditions that have their origin in the fetal or perinatal period (before birth through the first 28 days after birth) even if morbidity occurs later. For that reason, the diagnosis codes on this Age Conflict edit list would be expected to apply to conditions or disorders specific to that age group only.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20229), we indicated that, in the ICD-10-CM classification, there are 14 diagnosis codes that describe specific suspected conditions that have been evaluated and ruled out during the newborn period and are currently not on the Perinatal/Newborn Diagnoses Category edit code list. We consulted with staff at the Centers for Disease Control’s (CDC’s) National Center for Health Statistics (NCHS) because NCHS has the lead responsibility for the ICD-10-CM diagnosis codes. The NCHS’ staff confirmed that the following diagnosis codes are appropriate to add to the edit code list for the Perinatal/Newborn Diagnoses Category.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Z05.0	Observation and evaluation of newborn for suspected cardiac condition ruled out
Z05.1	Observation and evaluation of newborn for suspected infectious condition ruled out
Z05.2	Observation and evaluation of newborn for suspected neurological condition ruled out
Z05.3	Observation and evaluation of newborn for suspected respiratory condition ruled out

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Z05.41	Observation and evaluation of newborn for suspected genetic condition ruled out
Z05.42	Observation and evaluation of newborn for suspected metabolic condition ruled out
Z05.43	Observation and evaluation of newborn for suspected immunologic condition ruled out
Z05.5	Observation and evaluation of newborn for suspected gastrointestinal condition ruled out
Z05.6	Observation and evaluation of newborn for suspected genitourinary condition ruled out
Z05.71	Observation and evaluation of newborn for suspected skin and subcutaneous tissue condition ruled out
Z05.72	Observation and evaluation of newborn for suspected musculoskeletal condition ruled out
Z05.73	Observation and evaluation of newborn for suspected connective tissue condition ruled out
Z05.8	Observation and evaluation of newborn for other specified suspected condition ruled out
Z05.9	Observation and evaluation of newborn for unspecified suspected condition ruled out

Therefore, we proposed to add the ICD-10-CM diagnosis codes listed in the table above to the Age Conflict edit under the Perinatal/Newborn Diagnoses Category edit code list. We also proposed to continue to include the existing diagnosis codes currently listed under the Perinatal/Newborn Diagnoses Category edit code list.

Comment: Commenters agreed with CMS’ proposal to add the diagnosis codes listed in the table above to the Age Conflict edit under the Perinatal/Newborn Diagnoses Category edit code list.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing our proposal to add the ICD-10-CM diagnosis codes listed in the table above to the Age

Conflict edit under the Perinatal/Newborn Diagnoses Category edit code list. We also are finalizing our proposal to continue to include the existing list of codes on the Perinatal/Newborn Diagnoses Category edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

## (2) Pediatric Diagnoses Category

Under the ICD-10 MCE, the Pediatric Diagnoses Category for the Age Conflict edit considers the age range of 0 to 17 years inclusive. For that reason, the diagnosis codes on this Age Conflict edit list would be expected to apply to conditions or disorders specific to that age group only.

As discussed in section II.F.15. of the preamble of the proposed rule, Table 6C.--Invalid Diagnosis Codes associated with the proposed rule and this final (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) lists the diagnoses that will no longer be effective as of October 1, 2018. Included in this table is an ICD-10-CM diagnosis code currently listed on the Pediatric Diagnoses Category edit code list, ICD-10-CM diagnosis code Z13.4 (Encounter for screening for certain developmental disorders in childhood). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20230), we proposed to remove this code from the Pediatric Diagnoses Category edit code list. We also proposed to continue to include the other existing diagnosis codes currently listed under the Pediatric Diagnoses Category edit code list.

Comment: Commenters agreed with the proposal to remove ICD-10-CM diagnosis code Z13.4 from the Pediatric Diagnoses Category edit code list because this code will no longer be effective as of October 1, 2018.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to remove ICD-10-CM diagnosis code Z13.4 from the Pediatric Diagnoses Category edit code list. We also are finalizing our proposal to maintain the other existing codes on the Pediatric Diagnoses Category edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

### (3) Maternity Diagnoses

Under the ICD-10 MCE, the Maternity Diagnoses Category for the Age Conflict edit considers the age range of 12 to 55 years inclusive. For that reason, the diagnosis codes on this Age Conflict edit list would be expected to apply to conditions or disorders specific to that age group only.

As discussed in section II.F.15. of the preamble of the proposed rule, Table 6A.--New Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the new diagnoses codes that had been approved to date, which will be effective with discharges occurring on and after October 1, 2018. The following table lists the new ICD-10-CM diagnosis codes included in Table 6A associated with pregnancy and maternal care that we stated we believe are appropriate to add to the Maternity Diagnoses Category edit code list under

the Age Conflict edit. Therefore, in the proposed rule, we proposed to add these codes to the Maternity Diagnoses Category edit code list under the Age Conflict edit.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
F53.0	Postpartum depression
F53.1	Puerperal psychosis
O30.131	Triplet pregnancy, trichorionic/triamniotic, first trimester
O30.132	Triplet pregnancy, trichorionic/triamniotic, second trimester
O30.133	Triplet pregnancy, trichorionic/triamniotic, third trimester
O30.139	Triplet pregnancy, trichorionic/triamniotic, unspecified trimester
O30.231	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, first trimester
O30.232	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, second trimester
O30.233	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, third trimester
O30.239	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, unspecified trimester
O30.831	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, first trimester
O30.832	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, second trimester
O30.833	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, third trimester
O30.839	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, unspecified trimester
O86.00	Infection of obstetric surgical wound, unspecified
O86.01	Infection of obstetric surgical wound, superficial incisional site
O86.02	Infection of obstetric surgical wound, deep incisional site
O86.03	Infection of obstetric surgical wound, organ and space site
O86.04	Sepsis following an obstetrical procedure
O86.09	Infection of obstetric surgical wound, other surgical site

In addition, as discussed in section II.F.15. of the preamble of the proposed rule, Table 6C.--Invalid Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare->

[Fee-for-Service-Payment/AcuteInpatientPPS/index.html](#)) listed the diagnosis codes that will no longer be effective as of October 1, 2018. Included in this table are two ICD-10-CM diagnosis codes currently listed on the Maternity Diagnoses Category edit code list: ICD-10-CM diagnosis codes F53 (Puerperal psychosis) and O86.0 (Infection of obstetric surgical wound). In the proposed rule, we proposed to remove these codes from the Maternity Diagnoses Category Edit code list. We also proposed to continue to include the other existing diagnosis codes currently listed under the Maternity Diagnoses Category edit code list.

Comment: Commenters agreed with the proposal to add the diagnosis codes listed in the table above to the Maternity Diagnoses Category edit code list. Commenters also agreed with the proposal to remove ICD-10-CM diagnosis codes F53 and O86.0 from the Maternity Diagnoses Category edit code list.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add the diagnosis codes listed in the table above to the Maternity Diagnoses Category edit code list and our proposal to remove ICD-10-CM diagnosis codes F53 and O86.0 from the Maternity Diagnoses Category edit code list. We also are finalizing our proposal to maintain the other existing codes on the Maternity Diagnoses Category edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

#### b. Sex Conflict Edit

In the MCE, the Sex Conflict edit detects inconsistencies between a patient's sex and any diagnosis or procedure on the patient's record; for example, a male patient with

cervical cancer (diagnosis) or a female patient with a prostatectomy (procedure). In both instances, the indicated diagnosis or the procedure conflicts with the stated sex of the patient. Therefore, the patient’s diagnosis, procedure, or sex is presumed to be incorrect.

(1) Diagnoses for Females Only Edit

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20231), we indicated that we received a request to consider the addition of the following ICD-10-CM diagnosis codes to the list for the Diagnoses for Females Only edit.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Z30.015	Encounter for initial prescription of vaginal ring hormonal contraceptive
Z31.7	Encounter for procreative management and counseling for gestational carrier
Z98.891	History of uterine scar from previous surgery

The requestor noted that, currently, ICD-10-CM diagnosis code Z30.44 (Encounter for surveillance of vaginal ring hormonal contraceptive device) is on the Diagnoses for Females Only edit code list and suggested that ICD-10-CM diagnosis code Z30.015, which also describes an encounter involving a vaginal ring hormonal contraceptive, be added to the Diagnoses for Females Only edit code list as well. In addition, the requestor suggested that ICD-10-CM diagnosis codes Z31.7 and Z98.891 be added to the Diagnoses for Females Only edit code list.

We reviewed ICD-10-CM diagnosis codes Z30.015, Z31.7, and Z98.891, and we agreed with the requestor that it is clinically appropriate to add these three ICD-10-CM diagnosis codes to the Diagnoses for Females Only edit code list because the conditions described by these codes are specific to and consistent with the female sex.

In addition, as discussed in section II.F.15. of the preamble of the proposed rule, Table 6A.--New Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the new diagnosis codes that had been approved to date, which will be effective with discharges occurring on and after October 1, 2018. The following table lists the new diagnosis codes that are associated with conditions consistent with the female sex. We proposed to add these ICD-10-CM diagnosis codes to the Diagnoses for Females Only edit code list under the Sex Conflict edit.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
F53.0	Postpartum depression
F53.1	Puerperal psychosis
N35.82	Other urethral stricture, female
N35.92	Unspecified urethral stricture, female
O30.131	Triplet pregnancy, trichorionic/triamniotic, first trimester
O30.132	Triplet pregnancy, trichorionic/triamniotic, second trimester
O30.133	Triplet pregnancy, trichorionic/triamniotic, third trimester
O30.139	Triplet pregnancy, trichorionic/triamniotic, unspecified trimester
O30.231	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, first trimester
O30.232	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, second trimester
O30.233	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, third trimester
O30.239	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, unspecified trimester
O30.831	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, first trimester
O30.832	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, second trimester
O30.833	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, third trimester
O30.839	Other specified multiple gestation, number of chorions and amnions

ICD-10-CM Code	Code Description
	are both equal to the number of fetuses, unspecified trimester
O86.00	Infection of obstetric surgical wound, unspecified
O86.01	Infection of obstetric surgical wound, superficial incisional site
O86.02	Infection of obstetric surgical wound, deep incisional site
O86.03	Infection of obstetric surgical wound, organ and space site
O86.04	Sepsis following an obstetrical procedure
O86.09	Infection of obstetric surgical wound, other surgical site
Q51.20	Other doubling of uterus, unspecified
Q51.21	Other complete doubling of uterus
Q51.22	Other partial doubling of uterus
Q51.28	Other doubling of uterus, other specified
Z13.32	Encounter for screening for maternal depression

Comment: Commenters supported the proposals to add ICD-10-CM diagnosis codes Z30.015, Z31.7 and Z98.891 and the ICD-10-CM diagnosis codes listed in the table above to the Diagnoses for Females Only edit code list.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposals to add ICD-10-CM diagnosis codes Z30.015, Z31.7 and Z98.891 and the ICD-10-CM diagnosis codes listed in the table above to the Diagnoses for Females Only edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

In addition, as discussed in section II.F.15. of the preamble of the proposed rule, Table 6C.--Invalid Diagnosis Codes associated with the proposed rule (which is available via the internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the diagnosis codes that are no longer effective as of October 1, 2018. Included in this table were the following

three ICD-10-CM diagnosis codes currently listed on the Diagnoses for Females Only edit code list.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
F53	Puerperal psychosis
O86.0	Infection of obstetric surgical wound
Q51.2	Other doubling of uterus, unspecified

Because these three ICD-10-CM diagnosis codes will no longer be effective as of October 1, 2018, we proposed to remove them from the Diagnoses for Females Only edit code list under the Sex Conflict edit.

Comment: Commenters supported the proposal to remove ICD-10-CM diagnosis codes F53, O86.0, and Q51.2, from the Diagnoses for Females Only edit code list, as they are no longer valid effective October 1, 2018. One commenter also noted that there were typographical errors in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20232) for diagnosis codes O86.0 and Q51.2, where an extra zero was inadvertently included as a fifth digit.

Response: We appreciate the commenters’ support. We agree with the commenter that there were typographical errors in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20232) for diagnosis codes O86.0 and Q51.2, where an extra zero was inadvertently included as a fifth digit, and have corrected these errors in the table presented in this final rule preamble.

After consideration of the public comments we received, we are finalizing our proposal to remove ICD-10-CM diagnosis codes F53, O86.0, and Q51.2, from the

Diagnoses for Females Only edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

(2) Procedures for Females Only Edit

As discussed in section II.F.15. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, Table 6B.--New Procedure Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the procedure codes that had been approved to date, which will be effective with discharges occurring on and after October 1, 2018. In the proposed rule, we proposed to add the three ICD-10-PCS procedure codes in the following table describing procedures associated with the female sex to the Procedures for Females Only edit code list.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0UY90Z0	Transplantation of uterus, allogeneic, open approach
0UY90Z1	Transplantation of uterus, syngeneic, open approach
0UY90Z2	Transplantation of uterus, zooplasmic, open approach

We also proposed to continue to include the existing procedure codes currently listed under the Procedures for Females Only edit code list.

Comment: Commenters supported the proposal to add ICD-10-PCS procedure codes 0UY90Z0, 0UY90Z1 and 0UY90Z2 to the Procedures for Females Only edit code list.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add ICD-10-PCS procedure codes 0UY90Z0, 0UY90Z1 and 0UY90Z2 to the Procedures for Females Only edit code list. We also are finalizing our proposal to maintain the existing list of codes on the Procedures for Females Only edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

### (3) Diagnoses for Males Only Edit

As discussed in section II.F.15. of the preamble of the proposed rule, Table 6A.--New Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the new diagnosis codes that had been approved to date, which will be effective with discharges occurring on and after October 1, 2018. The following table lists the new diagnosis codes that are associated with conditions consistent with the male sex. In the proposed rule, we proposed to add these ICD-10-CM diagnosis codes to the Diagnoses for Males Only edit code list under the Sex Conflict edit.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
N35.016	Post-traumatic urethral stricture, male, overlapping sites
N35.116	Postinfective urethral stricture, not elsewhere classified, male, overlapping sites
N35.811	Other urethral stricture, male, meatal
N35.812	Other urethral bulbous stricture, male
N35.813	Other membranous urethral stricture, male
N35.814	Other anterior urethral stricture, male, anterior
N35.816	Other urethral stricture, male, overlapping sites
N35.819	Other urethral stricture, male, unspecified site
N35.911	Unspecified urethral stricture, male, meatal
N35.912	Unspecified bulbous urethral stricture, male

<b>ICD-10-CM Code</b>	<b>Code Description</b>
N35.913	Unspecified membranous urethral stricture, male
N35.914	Unspecified anterior urethral stricture, male
N35.916	Unspecified urethral stricture, male, overlapping sites
N35.919	Unspecified urethral stricture, male, unspecified site
N99.116	Postprocedural urethral stricture, male, overlapping sites
R93.811	Abnormal radiologic findings on diagnostic imaging of right testicle
R93.812	Abnormal radiologic findings on diagnostic imaging of left testicle
R93.813	Abnormal radiologic findings on diagnostic imaging of testicles, bilateral
R93.819	Abnormal radiologic findings on diagnostic imaging of unspecified testicle

We also proposed to continue to include the existing diagnosis codes currently listed under the Diagnoses for Males Only edit code list.

Comment: Commenters supported the proposal to add the ICD-10-CM diagnosis codes listed in the table above to the Diagnoses for Males Only edit code list.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add the ICD-10-CM diagnosis codes listed in the table above to the Diagnoses for Males Only edit code list. We also are finalizing our proposal to maintain the existing list of codes on the Diagnoses for Males Only edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

#### c. Manifestation Code as Principal Diagnosis Edit

In the ICD-10-CM classification system, manifestation codes describe the manifestation of an underlying disease, not the disease itself and, therefore, should not be used as a principal diagnosis.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20232), we noted that, as discussed in section II.F.15. of the preamble of the proposed rule, Table 6A.--New Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the new diagnosis codes that had been approved to date which will be effective with discharges occurring on and after October 1, 2018. Included in this table are ICD-10-CM diagnosis codes K82.A1 (Gangrene of gallbladder in cholecystitis) and K82.A2 (Perforation of gallbladder in cholecystitis). We proposed to add these two ICD-10-CM diagnosis codes to the Manifestation Code as Principal Diagnosis edit code list because the type of cholecystitis would be required to be reported first. We also proposed to continue to include the existing diagnosis codes currently listed under the Manifestation Code as Principal Diagnosis edit code list. We invited public comments on our proposals.

Comment: Commenters supported the proposal to add ICD-10-CM diagnosis codes K82.A1 and K82.A2 to the Manifestation Code as Principal Diagnosis edit code list and to continue to include the existing diagnosis codes currently listed under the Manifestation Code as Principal Diagnosis edit code list.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add ICD-10-CM diagnosis codes K82.A1 and K82.A2 to the Manifestation Code as Principal Diagnosis edit code list and to continue to include the existing

diagnosis codes currently listed under the Manifestation Code as Principal Diagnosis edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

d. Questionable Admission Edit

In the MCE, some diagnoses are not usually sufficient justification for admission to an acute care hospital. For example, if a patient is assigned ICD-10-CM diagnosis code R03.0 (Elevated blood pressure reading, without diagnosis of hypertension), the patient would have a questionable admission because an elevated blood pressure reading is not normally sufficient justification for admission to a hospital.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20233), we noted that, as discussed in section II.F.10. of the preamble of the proposed rule, we were proposing several modifications to the MS-DRGs under MDC 14 (Pregnancy, Childbirth and the Puerperium). We stated in the proposed rule that one aspect of these proposed modifications involves the GROUPER logic for the cesarean section and vaginal delivery MS-DRGs. We referred readers to section II.F.10. of the preamble of the proposed rule for a detailed discussion of the proposals regarding these MS-DRG modifications under MDC 14 and the relation to the MCE.

If a patient presents to the hospital and either a cesarean section or a vaginal delivery occurs, it is expected that, in addition to the specific type of delivery code, an outcome of delivery code is also assigned and reported on the claim. The outcome of delivery codes are ICD-10-CM diagnosis codes that are to be reported as secondary diagnoses as instructed in Section I.C.15.b.5 of the ICD-10-CM Official Guidelines for Coding and Reporting which states: “A code from category Z37, Outcome of delivery,

should be included on every maternal record when a delivery has occurred. These codes are not to be used on subsequent records or on the newborn record.” Therefore, to encourage accurate coding and appropriate MS-DRG assignment in alignment with the proposed modifications to the delivery MS-DRGs, we proposed to create a new “Questionable Obstetric Admission Edit” under the Questionable Admission edit to read as follows:

“b. Questionable obstetric admission

ICD-10-PCS procedure codes describing a cesarean section or vaginal delivery are considered to be a questionable admission *except* when reported with a corresponding secondary diagnosis code describing the outcome of delivery.

*Procedure code list for cesarean section*

10D00Z0 Extraction of Products of Conception, High, Open Approach

10D00Z1 Extraction of Products of Conception, Low, Open Approach

10D00Z2 Extraction of Products of Conception, Extraperitoneal, Open Approach

*Procedure code list for vaginal delivery*

10D07Z3 Extraction of Products of Conception, Low Forceps, Via Natural or Artificial Opening

10D07Z4 Extraction of Products of Conception, Mid Forceps, Via Natural or Artificial Opening

10D07Z5 Extraction of Products of Conception, High Forceps, Via Natural or Artificial Opening

10D07Z6 Extraction of Products of Conception, Vacuum, Via Natural or Artificial Opening

10D07Z7 Extraction of Products of Conception, Internal Version, Via Natural or Artificial Opening

10D07Z8 Extraction of Products of Conception, Other, Via Natural or Artificial Opening

10D17Z9 Manual Extraction of Products of Conception, Retained, Via Natural or Artificial Opening

10D18Z9 Manual Extraction of Products of Conception, Retained, Via Natural or Artificial Opening Endoscopic

10E0XZZ Delivery of Products of Conception, External Approach

*Secondary diagnosis code list for outcome of delivery*

Z37.0 Single live birth

Z37.1 Single stillbirth

Z37.2 Twins, both liveborn

Z37.3 Twins, one liveborn and one stillborn

Z37.4 Twins, both stillborn

Z37.50 Multiple births, unspecified, all liveborn

Z37.51 Triplets, all liveborn

Z37.52 Quadruplets, all liveborn

Z37.53 Quintuplets, all liveborn

Z37.54 Sextuplets, all liveborn

Z37.59 Other multiple births, all liveborn

Z37.60 Multiple births, unspecified, some liveborn

Z37.61 Triplets, some liveborn

Z37.62 Quadruplets, some liveborn

Z37.63 Quintuplets, some liveborn

Z37.64 Sextuplets, some liveborn

Z37.69 Other multiple births, some liveborn

Z37.7 Other multiple births, all stillborn

Z37.9 Outcome of delivery, unspecified”

We proposed that the three ICD-10-PCS procedure codes listed in the following table would be used to establish the list of codes for the proposed Questionable Obstetric Admission edit logic for cesarean section.

<b>ICD-10-PCS Procedure Codes for Cesarean Section under the Proposed Questionable Obstetric Admission Edit Code List in the MCE</b>	
<b>ICD-10-PCS Code</b>	<b>Code Description</b>
10D00Z0	Extraction of products of conception, high, open approach
10D00Z1	Extraction of products of conception, low, open approach
10D00Z2	Extraction of products of conception, extraperitoneal, open approach

We proposed that the nine ICD-10-PCS procedure codes listed in the following table would be used to establish the list of codes for the proposed new Questionable Obstetric Admission edit logic for vaginal delivery.

<b>ICD-10-PCS Procedure Codes for Vaginal Delivery under the Proposed Questionable Obstetric Admission Edit Code List in the MCE</b>	
<b>ICD-10-PCS Code</b>	<b>Code Description</b>
10D07Z3	Extraction of products of conception, low forceps, via natural or artificial opening

<b>ICD-10-PCS Procedure Codes for Vaginal Delivery under the Proposed Questionable Obstetric Admission Edit Code List in the MCE</b>	
<b>ICD-10-PCS Code</b>	<b>Code Description</b>
10D07Z4	Extraction of products of conception, mid forceps, via natural or artificial opening
10D07Z5	Extraction of products of conception, high forceps, via natural or artificial opening
10D07Z6	Extraction of products of conception, vacuum, via natural or artificial opening
10D07Z7	Extraction of products of conception, internal version, via natural or artificial opening
10D07Z8	Extraction of products of conception, other, via natural or artificial opening
10D17Z9	Manual extraction of products of conception, retained, via natural or artificial opening
10D18Z9	Manual extraction of products of conception, retained, via natural or artificial opening
10E0XZZ	Delivery of products of conception, external approach

We proposed that the 19 ICD-10-CM diagnosis codes listed in the following table would be used to establish the list of secondary diagnosis codes for the proposed new Questionable Obstetric Admission edit logic for outcome of delivery.

<b>ICD-10-CM Secondary Diagnosis Codes for Outcome of Delivery under the Proposed Questionable Obstetric Admission Edit Code List in the MCE</b>	
<b>ICD-10-CM Code</b>	<b>Code Description</b>
Z37.0	Single live birth
Z37.1	Single stillbirth
Z37.2	Twins, both liveborn
Z37.3	Twins, one liveborn and one stillborn
Z37.4	Twins, both stillborn
Z37.50	Multiple births, unspecified, all liveborn
Z37.51	Triplets, all liveborn
Z37.52	Quadruplets, all liveborn
Z37.53	Quintuplets, all liveborn
Z37.54	Sextuplets, all liveborn
Z37.59	Other multiple births, all liveborn
Z37.60	Multiple births, unspecified, some liveborn

<b>ICD-10-CM Secondary Diagnosis Codes for Outcome of Delivery under the Proposed Questionable Obstetric Admission Edit Code List in the MCE</b>	
<b>ICD-10-CM Code</b>	<b>Code Description</b>
Z37.61	Triplets, some liveborn
Z37.62	Quadruplets, some liveborn
Z37.63	Quintuplets, some liveborn
Z37.64	Sextuplets, some liveborn
Z37.69	Other multiple births, some liveborn
Z37.7	Other multiple births, all liveborn
Z37.9	Outcome of delivery, unspecified

Comment: Commenters supported creating the new Questionable Obstetric Admission edit. Commenters also supported the list of diagnoses and procedure codes that we proposed to include for the proposed new edit. However, a few commenters expressed concern with several of the procedure codes that were proposed for inclusion under the vaginal delivery procedure code list. Specifically, the commenters identified that ICD-10-PCS procedure codes 10D17Z9 and 10D18Z9 may be reported for other clinical indications, in the absence of an outcome of delivery diagnosis code. Therefore, the commenter stated that the edit would be triggered erroneously for those case scenarios.

Response: We appreciate the commenters’ support. We reviewed the procedure codes for which the commenters expressed concern under the vaginal delivery procedure code list (ICD-10-PCS procedure codes 10D17Z9 and 10D18Z9) and agree that there may be instances in which the procedure codes could be reported in the absence of an outcome of delivery diagnosis code. Therefore, we believe it is appropriate to remove these two procedure codes from the vaginal delivery procedure code list for the edit. In addition, we reviewed ICD-10-PCS procedure codes 10D07Z6 and 10D07Z8 and believe

the procedures could potentially be performed for other clinical indications, in the absence of an outcome of delivery code, and erroneously trigger the proposed edit if reported.

After consideration of the public comments we received, we are finalizing our proposal to create the new Questionable Obstetric Admission edit. We also are finalizing our proposal to include ICD-10-PCS procedure codes 10D00Z0, 10D00Z1, and 10D00Z2 listed above for the “Procedure code list for cesarean section” portion of the edit. We are finalizing our proposal to include the procedure codes listed above for vaginal delivery with modifications. Specifically, we are not including ICD-10-PCS procedure codes 10D07Z6, 10D07Z87, 10D17Z9 and 10D18Z9 in the “Procedure code list for vaginal delivery” portion of the edit and finalizing the inclusion of the remaining procedure codes listed above. In addition, we are finalizing our proposal to include the diagnosis codes listed above under the “Secondary diagnosis code list for outcome of delivery” portion of the edit. We are finalizing these changes as described above under the ICD-10 MCE Version 36, effective October 1, 2018.

e. Unacceptable Principal Diagnosis Edit

In the MCE, there are select codes that describe a circumstance which influences an individual's health status, but does not actually describe a current illness or injury. There also are codes that are not specific manifestations, but may be due to an underlying cause. These codes are considered unacceptable as a principal diagnosis. In limited situations, there are a few codes on the MCE Unacceptable Principal Diagnosis edit code list that are considered "acceptable" when a specified secondary diagnosis is also coded and reported on the claim.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20234), we noted that, as discussed in section II.F.9. of the preamble of the proposed rule, ICD-10-CM diagnosis codes Z49.02 (Encounter for fitting and adjustment of peritoneal dialysis catheter), Z49.31 (Encounter for adequacy testing for hemodialysis), and Z49.32 (Encounter for adequacy testing for peritoneal dialysis) are currently on the Unacceptable Principal Diagnosis edit code list. We proposed to add diagnosis code Z49.01 (Encounter for fitting and adjustment of extracorporeal dialysis catheter) to the Unacceptable Principal Diagnosis edit code list because this is an encounter code that would more likely be performed in an outpatient setting.

Comment: Some commenters supported the proposal to add ICD-10-CM diagnosis code Z49.01 to the Unacceptable Principal Diagnosis edit code list. However, some commenters recommended that CMS reconsider the proposal. These commenters did not dispute the fact that this code is more likely to be reported in the outpatient setting. However, they stated that the proposal to add it to the edit appeared to conflict

with the proposal that was discussed in section II.F.9. for MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract) and MS-DRG 685 (Admit for Renal Dialysis). According to the commenters, CMS proposed to only reassign diagnosis code Z49.01 as a principal diagnosis in the proposal to delete MS-DRG 685 and reassign diagnosis code Z49.01 to MS-DRGs 698, 699 and 700.

Response: We appreciate the commenters' support. With regard to the commenters who recommended that we reconsider the proposal to add diagnosis code Z49.01 to the Unacceptable Principal Diagnoses edit code list, we believe there is some confusion with respect to the proposal that was discussed in section II.F.9. of the preamble of the proposed rule. The proposal was to reassign diagnosis codes Z49.01, Z49.02, Z49.31 and Z49.32 to MS-DRGs 698, 699 and 700 (Other Kidney and Urinary Tract Diagnoses with MCC, with CC and without CC/MCC, respectively) with the proposed deletion of MS-DRG 685. We are unable to determine what aspect of the proposal that was discussed in section II.F. 9. of the preamble of the proposed rule was unclear. For example, it is not clear if the commenters' confusion relates to the GROUPER logic for MS-DRGs 698, 699, and 700 as shown in the ICD-10 MS-DRG Definitions Manual. As discussed elsewhere in this final rule, in the ICD-10 MS-DRG Definitions Manual, diagnosis codes listed under the heading of "Principal Diagnosis" may appear to indicate that those codes are to be reported as a principal diagnosis for assignment to the respective MS-DRG. However, the Definitions Manual display of the GROUPER logic assignment for each diagnosis code is for grouping purposes only and does not correspond to coding guidelines for reporting the principal diagnosis. In other

words, cases will group according to the GROUPER logic, regardless of any coding guidelines or coverage policies. It is the MCE and other payer-specific edits that identify inconsistencies in the coding guidelines or coverage policies.

We also noted in the proposed rule that, as discussed in section II.F.15. of the preamble of the proposed rule, Table 6C.--Invalid Diagnosis Codes associated with the proposed rule (which is available via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>) listed the diagnosis codes that will no longer be effective as of October 1, 2018. As previously noted, included in this table is an ICD-10-CM diagnosis code Z13.4 (Encounter for screening for certain developmental disorders in childhood) which is currently listed on the Unacceptable Principal Diagnoses edit code list. We proposed to remove this code from the Unacceptable Principal Diagnosis edit code list.

We also proposed to continue to include the other existing diagnosis codes currently listed under the Unacceptable Principal Diagnosis edit code list.

Comment: Commenters supported the proposal to remove ICD-10-CM diagnosis code Z13.4 from the Unacceptable Principal diagnoses category edit code list because it will be an invalid code effective October 1, 2018.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to add ICD-10-CM diagnosis code Z49.01 to the Unacceptable Principal Diagnosis edit code list. We also are finalizing our proposal to remove ICD-10-CM

diagnosis code Z13.4 from the Unacceptable Principal Diagnosis edit code list. In addition, we are finalizing our proposal to maintain the other existing codes on the Unacceptable Principal Diagnosis edit code list under the ICD-10 MCE Version 36, effective October 1, 2018.

Comment: One commenter requested that CMS review a coverage edit in the MCE manual and software. According to the commenter, CMS began covering multiple myeloma on January 1, 2016 under the condition of coverage with evidence development (CED) as shown in guidance located at:

[https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-](https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-MM.html)

[MM.html](https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-MM.html). The commenter noted that the applicable procedure codes along with

diagnosis codes C90.00 (Multiple myeloma not having achieved remission) and C90.01

(Multiple myeloma in remission) are listed as “non-covered” in the MCE manual and

encouraged CMS to review further and make any necessary updates as needed to ensure

claims are processed appropriately.

Response: We thank the commenter for bringing this to our attention. Upon review, guidance was issued on January 27, 2016 for allogeneic hematopoietic stem cell transplant (HSCT) for certain Medicare beneficiaries with multiple myeloma under CED.

This guidance is available via the Internet on the CMS website at:

[https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-](https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-MM.html)

[MM.html](https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-MM.html). We agree with the commenter and, therefore, are removing the following

noncovered procedure edit from the ICD-10 MCE Version 36 manual, effective October

1, 2018:

**“E. Non-covered procedure codes**

The procedures shown below are identified as non-covered procedures only when any code from the diagnoses list shown below is present as either a principal or secondary diagnosis.

## Procedures

30230G2 Transfuse Allo Rel Bone Marrow in Periph Vein, Open  
30230G3 Transfuse Allo Unr Bone Marrow in Periph Vein, Open  
30230G4 Transfuse Allo Unsp Bone Marrow in Periph Vein, Open  
30230Y2 Transfuse Allo Rel Hemat Stem Cell in Periph Vein, Open  
30230Y3 Transfuse Allo Unr Hemat Stem Cell in Periph Vein, Open  
30230Y4 Transfuse Allo Unsp Hemat Stem Cell in Periph Vein, Open  
30233G2 Transfuse Allo Rel Bone Marrow in Periph Vein, Perc  
30233G3 Transfuse Allo Unr Bone Marrow in Periph Vein, Perc  
30233G4 Transfuse Allo Unsp Bone Marrow in Periph Vein, Perc  
30233Y2 Transfuse Allo Rel Hemat Stem Cell in Periph Vein, Per  
30233Y3 Transfuse Allo Unr Hemat Stem Cell in Periph Vein, Perc  
30233Y4 Transfuse Allo Unsp Hemat Stem Cell in Periph Vein, Perc  
30240G2 Transfuse Allo Rel Bone Marrow in Central Vein, Open  
30240G3 Transfuse Allo Unr Bone Marrow in Central Vein, Open  
30240G4 Transfuse Allo Unsp Bone Marrow in Central Vein, Open  
30240Y2 Transfuse Allo Rel Hemat Stem Cell in Central Vein, Open  
30240Y3 Transfuse Allo Unr Hemat Stem Cell in Central Vein, Open  
30240Y4 Transfuse Allo Unsp Hemat Stem Cell in Central Vein, Open  
30243G2 Transfuse Allo Rel Bone Marrow in Central Vein, Perc  
30243G3 Transfuse Allo Unr Bone Marrow in Central Vein, Perc  
30243G4 Transfuse Allo Unsp Bone Marrow in Central Vein, Perc

30243Y2 Transfuse Allo Rel Hemat Stem Cell in Central Vein, Perc

30243Y3 Transfuse Allo Unr Hemat Stem Cell in Central Vein, Perc

30243Y4 Transfuse Allo Unsp Hemat Stem Cell in Central Vein, Perc

30250G1 Transfuse Nonaut Bone Marrow in Periph Art, Open

30250Y1 Transfuse Nonaut Hemat Stem Cell in Periph Art, Open

30253G1 Transfuse Nonaut Bone Marrow in Periph Art, Perc

30253Y1 Transfuse Nonaut Hemat Stem Cell in Periph Art, Perc

30260G1 Transfuse Nonaut Bone Marrow in Central Art, Open

30260Y1 Transfuse Nonaut Hemat Stem Cell in Central Art, Open

30263G1 Transfuse Nonaut Bone Marrow in Central Art, Perc

30263Y1 Transfuse Nonaut Hemat Stem Cell in Central Art, Perc

#### Diagnoses

C9000 Multiple myeloma not having achieved remission

C9001 Multiple myeloma in remission”

This update will also be reflected in the ICD-10 MCE software Version 36 effective October 1, 2018.

#### f. Future Enhancement

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38053 through 38054), we noted the importance of ensuring accuracy of the coded data from the reporting, collection, processing, coverage, payment, and analysis aspects. We have engaged a contractor to assist in the review of the limited coverage and noncovered procedure edits in the MCE that may also be present in other claims processing systems that are utilized by our MACs. The MACs must adhere to criteria specified within the National Coverage

Determinations (NCDs) and may implement their own edits in addition to what are already incorporated into the MCE, resulting in duplicate edits. The objective of this review is to identify where duplicate edits may exist and to determine what the impact might be if these edits were to be removed from the MCE.

We have noted that the purpose of the MCE is to ensure that errors and inconsistencies in the coded data are recognized during Medicare claims processing. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20235), we indicated that we are considering whether the inclusion of coverage edits in the MCE necessarily aligns with that specific goal because the focus of coverage edits is on whether or not a particular service is covered for payment purposes and not whether it was coded correctly.

As we continue to evaluate the purpose and function of the MCE with respect to ICD-10, we encourage public input for future discussion. As we discussed in the FY 2018 IPPS/LTCH PPS final rule, we recognize a need to further examine the current list of edits and the definitions of those edits. We continue to encourage public comments on whether there are additional concerns with the current edits, including specific edits or language that should be removed or revised, edits that should be combined, or new edits that should be added to assist in detecting errors or inaccuracies in the coded data. Comments should be directed to the MS-DRG Classification Change Mailbox located at: [MSDRGClassificationChange@cms.hhs.gov](mailto:MSDRGClassificationChange@cms.hhs.gov) by November 1, 2018 for FY 2020.

#### 14. Changes to Surgical Hierarchies

Some inpatient stays entail multiple surgical procedures, each one of which, occurring by itself, could result in assignment of the case to a different MS-DRG within the MDC to which the principal diagnosis is assigned. Therefore, it is necessary to have a decision rule within the GROUPER by which these cases are assigned to a single MS-DRG. The surgical hierarchy, an ordering of surgical classes from most resource-intensive to least resource-intensive, performs that function. Application of this hierarchy ensures that cases involving multiple surgical procedures are assigned to the MS-DRG associated with the most resource-intensive surgical class.

A surgical class can be composed of one or more MS-DRGs. For example, in MDC 11, the surgical class “kidney transplant” consists of a single MS-DRG (MS-DRG 652) and the class “major bladder procedures” consists of three MS-DRGs (MS-DRGs 653, 654, and 655). Consequently, in many cases, the surgical hierarchy has an impact on more than one MS-DRG. The methodology for determining the most resource-intensive surgical class involves weighting the average resources for each MS-DRG by frequency to determine the weighted average resources for each surgical class. For example, assume surgical class A includes MS-DRGs 001 and 002 and surgical class B includes MS-DRGs 003, 004, and 005. Assume also that the average costs of MS-DRG 001 are higher than that of MS-DRG 003, but the average costs of MS-DRGs 004 and 005 are higher than the average costs of MS-DRG 002. To determine whether surgical class A should be higher or lower than surgical class B in the surgical hierarchy, we would weigh the average costs of each MS-DRG in the class by frequency (that is, by the number of cases in the MS-DRG) to determine average resource

consumption for the surgical class. The surgical classes would then be ordered from the class with the highest average resource utilization to that with the lowest, with the exception of “other O.R. procedures” as discussed in this final rule.

This methodology may occasionally result in assignment of a case involving multiple procedures to the lower-weighted MS-DRG (in the highest, most resource-intensive surgical class) of the available alternatives. However, given that the logic underlying the surgical hierarchy provides that the GROUPER search for the procedure in the most resource-intensive surgical class, in cases involving multiple procedures, this result is sometimes unavoidable.

We note that, notwithstanding the foregoing discussion, there are a few instances when a surgical class with a lower average cost is ordered above a surgical class with a higher average cost. For example, the “other O.R. procedures” surgical class is uniformly ordered last in the surgical hierarchy of each MDC in which it occurs, regardless of the fact that the average costs for the MS-DRG or MS-DRGs in that surgical class may be higher than those for other surgical classes in the MDC. The “other O.R. procedures” class is a group of procedures that are only infrequently related to the diagnoses in the MDC, but are still occasionally performed on patients with cases assigned to the MDC with these diagnoses. Therefore, assignment to these surgical classes should only occur if no other surgical class more closely related to the diagnoses in the MDC is appropriate.

A second example occurs when the difference between the average costs for two surgical classes is very small. We have found that small differences generally do not

warrant reordering of the hierarchy because, as a result of reassigning cases on the basis of the hierarchy change, the average costs are likely to shift such that the higher-ordered surgical class has lower average costs than the class ordered below it.

Based on the changes that we proposed to make in the FY 2019 IPPS/LTCH PPS proposed rule, as discussed in section II.F.10. of the preamble of this final rule, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20235), we proposed to revise the surgical hierarchy for MDC 14 (Pregnancy, Childbirth & the Puerperium) as follows: In MDC 14, we proposed to delete MS-DRGs 765 and 766 (Cesarean Section with and without CC/MCC, respectively) and MS-DRG 767 (Vaginal Delivery with Sterilization and/or D&C) from the surgical hierarchy. We proposed to sequence proposed new MS-DRGs 783, 784, and 785 (Cesarean Section with Sterilization with MCC, with CC and without CC/MCC, respectively) above proposed new MS-DRGs 786, 787, and 788 (Cesarean Section without Sterilization with MCC, with CC and without CC/MCC, respectively). We proposed to sequence proposed new MS-DRGs 786, 787, and 788 (Cesarean Section without Sterilization with MCC, with CC and without CC/MCC, respectively) above MS-DRG 768 (Vaginal Delivery with O.R. Procedure Except Sterilization and/or D&C). We also proposed to sequence proposed new MS-DRGs 796, 797, and 798 (Vaginal Delivery with Sterilization/D&C with MCC, with CC and without CC/MCC, respectively) below MS-DRG 768 and above MS-DRG 770 (Abortion with D&C, Aspiration Curettage or Hysterotomy). Finally, we proposed to sequence proposed new MS-DRGs 817, 818, and 819 (Other Antepartum Diagnoses with O.R. procedure with MCC, with CC and without CC/MCC, respectively) below MS-DRG 770 and above

MS-DRG 769 (Postpartum and Post Abortion Diagnoses with O.R. Procedure). Our proposals for Appendix D MS-DRG Surgical Hierarchy by MDC and MS-DRG of the ICD-10 MS-DRG Definitions Manual Version 36 are illustrated in the following table.

<b>Proposed Surgical Hierarchy: MDC 14 (Pregnancy, Childbirth and the Puerperium)</b>	
Proposed New MS-DRGs 783-785	Cesarean Section with Sterilization
Proposed New MS-DRGs 786-788	Cesarean Section without Sterilization
MS-DRG 768	Vaginal Delivery with O.R. Procedures
Proposed New MS-DRGs 796-798	Vaginal Delivery with Sterilization/D&C
MS-DRG 770	Abortion with D&C, Aspiration Curettage or Hysterotomy
Proposed New MS-DRGs 817-819	Other Antepartum Diagnoses with O.R. Procedure
MS-DRG 769	Postpartum and Post Abortion Diagnoses with O.R. Procedure

Comment: Commenters supported the proposed additions, deletions, and sequencing for the surgical hierarchy under MDC 14.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposed changes to Appendix D MS-DRG Surgical Hierarchy by MDC and MS-DRG of the ICD-10 MS-DRG Definitions Manual Version 36 as illustrated in the table above effective October 1, 2018.

As with other MS-DRG related issues, we encourage commenters to submit requests to examine ICD-10 claims pertaining to the surgical hierarchy via the CMS MS-DRG Classification Change Request Mailbox located at:

[MSDRGClassificationChange@cms.hhs.gov](mailto:MSDRGClassificationChange@cms.hhs.gov) by November 1, 2018 for FY 2020 consideration.

## 15. Changes to the MS-DRG Diagnosis Codes for FY 2019

### a. Background of the CC List and the CC Exclusions List

Under the IPPS MS-DRG classification system, we have developed a standard list of diagnoses that are considered CCs. Historically, we developed this list using physician panels that classified each diagnosis code based on whether the diagnosis, when present as a secondary condition, would be considered a substantial complication or comorbidity. A substantial complication or comorbidity was defined as a condition that, because of its presence with a specific principal diagnosis, would cause an increase in the length-of-stay by at least 1 day in at least 75 percent of the patients. However, depending on the principal diagnosis of the patient, some diagnoses on the basic list of complications and comorbidities may be excluded if they are closely related to the principal diagnosis. In FY 2008, we evaluated each diagnosis code to determine its impact on resource use and to determine the most appropriate CC subclassification (non-CC, CC, or MCC) assignment. We refer readers to sections II.D.2. and 3. of the preamble of the FY 2008 IPPS final rule with comment period for a discussion of the refinement of CCs in relation to the MS-DRGs we adopted for FY 2008 (72 FR 47152 through 47171).

b. Additions and Deletions to the Diagnosis Code Severity Levels for FY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20236), we indicated that the following tables identifying the proposed additions and deletions to the MCC severity levels list and the proposed additions and deletions to the CC severity levels list for FY 2019 were available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

Table 6I.1--Proposed Additions to the MCC List--FY 2019;

Table 6I.2--Proposed Deletions to the MCC List--FY 2019;

Table 6J.1--Proposed Additions to the CC List--FY 2019;

and

Table 6J.2--Proposed Deletions to the CC List--FY 2019.

We invited public comments on our proposed severity level designations for the diagnosis codes listed in Table 6I.1. and Table 6J.1. We noted that, for Table 6I.2. and Table 6J.2., the proposed deletions are a result of code expansions, with the exception of diagnosis codes B20 and J80, which are the result of proposed severity level designation changes. Therefore, the diagnosis codes on these lists will no longer be valid codes, effective FY 2019.

We referred readers to the Tables 6I.1, 6I.2, 6J.1, and 6J.2 associated with the proposed rule, which are available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

Comment: Commenters supported the proposed additions and deletions for the diagnosis codes, and their corresponding severity level designations that were listed in Tables 6I.1, 6I.2, 6J.1, and 6J.2. associated with the FY 2019 IPPS/LTCH PPS proposed rule. However, a few commenters expressed concern with the proposed severity level designation change to diagnosis code B20, and recommended CMS conduct further analysis prior to finalizing any proposals.

Response: We appreciate the commenters' support. We refer readers to section II.F.16.b. of the preamble of this final rule for the detailed discussion of public comments related to the proposals and final statement of policy involving diagnosis codes B20 and J80.

Comment: One commenter disagreed with CMS' proposal to designate diagnosis codes K35.20 (Acute appendicitis with generalized peritonitis, without abscess) and T81.44XA (Sepsis following a procedure, initial encounter) as CC severity levels, and recommended CMS reconsider the conditions and classify the severity levels as MCCs. The commenter noted that the predecessor code for diagnosis code K35.20 is diagnosis code K35.2 (Acute appendicitis with generalized peritonitis), which is classified as a MCC severity level designation. Therefore, the commenter also believed that diagnosis code K35.20 should be designated as a MCC severity level. Additionally, the commenter stated that diagnosis code T81.44XA should be classified as an MCC severity level because sepsis is defined as a life-threatening organ dysfunction caused by a host response to infection.

Response: While we acknowledge that our process in assigning a severity level designation for a diagnosis code generally begins with identifying the designation of the predecessor code assignment, we believe that any new or revised clinical concepts included in the new diagnosis codes should also be considered when making a severity level designation. We reviewed diagnosis codes K35.20 and T81.44XA and our clinical advisors continue to support the CC severity level designation of these diagnosis codes. The commenter is correct that, effective October 1, 2018, diagnosis code K35.20 has been expanded from the current diagnosis code K35.2. However, we also note that, effective October 1, 2018, diagnosis code K35.2 has been expanded to create new diagnosis code K35.21 (Acute appendicitis with generalized peritonitis, with abscess). In addition, effective October 1, 2018, diagnosis code K35.3 (Acute appendicitis with localized peritonitis) has been expanded to create new diagnosis codes K35.30 (Acute appendicitis with localized peritonitis, without perforation or gangrene), K35.31 (Acute appendicitis with localized peritonitis and gangrene, without perforation), K35.32 (Acute appendicitis with perforation and localized peritonitis, without abscess) and K35.33 (Acute appendicitis with perforation and localized peritonitis, with abscess). Consistent with our usual process, in reviewing all of these newly expanded conditions, our clinical advisors considered the additional clinical concepts now included with each diagnosis code in evaluating the appropriate proposed severity level assignments. Our clinical advisors believed that the new diagnosis codes for acute appendicitis described as “with abscess” or “with perforation” were clinically qualified for the MCC severity level designation, while acute appendicitis “without abscess” or “without perforation” were

clinically qualified for the CC severity level designation because cases with abscess or perforation would be expected to require more clinical resources and time to treat while those cases “without abscess” or “without perforation” are not as severe clinical conditions. As such, we disagree with the commenter that, based on the designation of its predecessor code alone, diagnosis code K35.20 should be designated as an MCC severity level instead of a CC for FY 2019. With regard to diagnosis code T81.44XA, our clinical advisors maintain that a CC severity level designation is most appropriate because the new code is clinically consistent with the predecessor code, T81.4XXA (Infection following a procedure, initial encounter), which also has a CC severity level designation. Currently, under Version 35 of the ICD-10 MS-DRGs, diagnosis code T81.4XXA contains several inclusion terms (conditions for which the code may be reported), one of which is “sepsis following a procedure”. Our clinical advisors do not believe that the creation of a unique diagnosis code to specifically identify this condition within the classification introduces a new clinical concept requiring a higher level of resources. The new diagnosis code provides additional detail as to the *type* of infection following a procedure. However, it is considered to be clinically similar to the current diagnosis code describing an infection following a procedure. We also note that an additional five new diagnosis codes describing infections of varying degrees following a procedure were created for FY 2019 based on the other inclusion terms that currently exist at diagnosis code T81.4XXA.

As shown in the table below and in Table 6J.1. associated with the proposed rule, a total of six new diagnosis codes were proposed to be designated at the CC severity level

based on review of the predecessor code (T81.4XXA), clinical coherence, and resource considerations.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
T81.40XA	Infection following a procedure, unspecified, initial encounter
T81.41XA	Infection following a procedure, superficial incisional surgical site, initial encounter
T81.42XA	Infection following a procedure, deep incisional surgical site, initial encounter
T81.43XA	Infection following a procedure, organ and space surgical site, initial encounter
T81.44XA	Sepsis following a procedure, initial encounter
T81.49XA	Infection following a procedure, other surgical site, initial encounter

Therefore, for the reasons discussed above, our clinical advisors continue to support the proposed CC severity level designation for diagnosis code T81.44XA for FY 2019.

In addition, because these diagnosis codes identified by the commenter are new, we do not have any claims data for further analysis. Once we have additional claims data to allow us to conduct further review, we can continue to examine these conditions to determine if their impact on resource use is equal to or above the expected value of a CC severity level designation.

After consideration of the public comments we received, we are finalizing our proposal to designate diagnosis codes K35.20 and T81.44XA as CC severity levels. We also are finalizing our other proposed additions and deletions with their corresponding severity level designations for FY 2019. We refer readers to Tables 6I.1., 6I.2, 6J.1, and 6J.2. associated with this final rule, which are available via the Internet on the CMS

website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

c. Principal Diagnosis Is Its Own CC or MCC

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38060), we provided the public with notice of our plans to conduct a comprehensive review of the CC and MCC lists for FY 2019. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38056 through 38057), we also finalized our proposal to maintain the existing lists of principal diagnosis codes in Table 6L.--Principal Diagnosis Is Its Own MCC List and Table 6M.--Principal Diagnosis Is Its Own CC List for FY 2018, without any changes to the existing lists, noting our plans to conduct a comprehensive review of the CC and MCC lists for FY 2019 (82 FR 38060). We stated that having multiple lists for CC and MCC diagnoses when reported as a principal and/or secondary diagnosis may not provide an accurate representation of resource utilization for the MS-DRGs.

We also stated that the purpose of the Principal Diagnosis Is Its Own CC or MCC Lists was to ensure consistent MS-DRG assignment between the ICD-9-CM and ICD-10 MS-DRGs. The Principal Diagnosis Is Its Own CC or MCC Lists were developed for the FY 2016 implementation of the ICD-10 version of the MS-DRGs to facilitate replication of the ICD-9-CM MS-DRGs. As part of our efforts to replicate the ICD-9-CM MS-DRGs, we implemented logic that may have increased the complexity of the MS-DRG assignment hierarchy and altered the format of the ICD-10 MS-DRG Definitions Manual. Two examples of workarounds used to facilitate replication are the proliferation of

procedure clusters in the surgical MS-DRGs and the creation of the Principal Diagnosis Is Its Own CC or MCC Lists special logic.

The following paragraph was added to the Version 33 ICD-10 MS-DRG Definitions Manual to explain the use of the Principal Diagnosis Is Its Own CC or MCC Lists: “A few ICD-10-CM diagnosis codes express conditions that are normally coded in ICD-9-CM using two or more ICD-9-CM diagnosis codes. In the interest of ensuring that the ICD-10 MS-DRGs Version 33 places a patient in the same DRG regardless whether the patient record were to be coded in ICD-9-CM or ICD-10-CM/PCS, whenever one of these ICD-10-CM combination codes is used as principal diagnosis, the cluster of ICD-9-CM codes that would be coded on an ICD-9-CM record is considered. If one of the ICD-9-CM codes in the cluster is a CC or MCC, then the single ICD-10-CM combination code used as a principal diagnosis must also imply the CC or MCC that the ICD-9-CM cluster would have presented. The ICD-10-CM diagnoses for which this implication must be made are listed here.” Versions 34 and 35 of the ICD-10 MS-DRG Definitions Manual also include this special logic for the MS-DRGs.

The Principal Diagnosis Is Its Own CC or MCC Lists were developed in the absence of ICD-10 coded data by mapping the ICD-9-CM diagnosis codes to the new ICD-10-CM combination codes. CMS has historically used clinical judgment combined with data analysis to assign a principal diagnosis describing a complex or severe condition to the appropriate DRG or MS-DRG. The initial ICD-10 version of the MS-DRGs replicated from the ICD-9 version can now be evaluated using clinical judgment combined with ICD-10 coded data because it is no longer necessary to replicate

MS-DRG assignment across the ICD-9 and ICD-10 versions of the MS-DRGs for purposes of calculating relative weights. Now that ICD-10 coded data are available, in addition to using the data for calculating relative weights, ICD-10 data can be used to evaluate the effectiveness of the special logic for assigning a severity level to a principal diagnosis, as an indicator of resource utilization. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20237), to evaluate the effectiveness of the special logic, we conducted analysis of the ICD-10 coded data combined with clinical review to determine whether to propose to keep the special logic for assigning a severity level to a principal diagnosis, or to propose to remove the special logic and use other available means of assigning a complex principal diagnosis to the appropriate MS-DRG.

In the proposed rule, using claims data from the September 2017 update of the FY 2017 MedPAR file, we employed the following method to determine the impact of removing the special logic used in the current Version 35 GROUPEX to process claims containing a code on the Principal Diagnosis Is Its Own CC or MCC Lists. Edits and cost estimations used for relative weight calculations were applied, resulting in 9,070,073 IPPS claims analyzed for this special logic impact evaluation. We refer readers to section II.G. of the preamble of this final rule for further information regarding the methodology for calculation of the relative weights.

First, we identified the number of cases potentially impacted by the special logic. We identified 310,184 cases reporting a principal diagnosis on the Principal Diagnosis Is Its Own CC or MCC lists. Of the 310,184 total cases that reported a principal diagnosis code on the Principal Diagnosis Is Its Own CC or MCC Lists, 204,749 cases also

reported a secondary diagnosis code at the same severity level or higher severity level, and therefore the special logic had no impact on MS-DRG assignment. However, of the 310,184 total cases, there were 105,435 cases that did not report a secondary diagnosis code at the same severity level or higher severity level, and therefore the special logic could potentially impact MS-DRG assignment, depending on the specific severity leveling structure of the base DRG.

Next, we removed the special logic in the GROUPER that is used for processing claims reporting a principal diagnosis on the Principal Diagnosis Is Its Own CC or MCC Lists, thereby creating a Modified Version 35 GROUPER. Using this Modified Version 35 GROUPER, we reprocessed the 105,435 claims for which the principal diagnosis code was the sole source of a MCC or CC on the case, to obtain data for comparison showing the effect of removing the special logic.

After removing the special logic in the Version 35 GROUPER for processing claims containing diagnosis codes on the Principal Diagnosis Is Its Own CC or MCC Lists, and reprocessing the claims using the Modified Version 35 GROUPER software, we found that 18,596 (6 percent) of the 310,184 cases reporting a principal diagnosis on the Principal Diagnosis Is Its Own CC or MCC Lists resulted in a different MS-DRG assignment. Overall, the number of claims impacted by removal of the special logic (18,596) represents 0.2 percent of the 9,070,073 IPPS claims analyzed.

Below we provide a summary of the steps that we followed for the analysis performed.

Step 1. We analyzed 9,070,073 claims to determine the number of cases impacted by the special logic.

<b>With Special Logic – 9,070,073 Claims Analyzed</b>	
Number of cases reporting a principal diagnosis from the Principal Diagnosis Is Its Own CC/MCC lists (special logic)	310,184
Number of cases reporting an additional CC/MCC secondary diagnosis code at or above the level of the designated severity level of the principal diagnosis	204,749
Number of cases not reporting an additional CC/MCC secondary diagnosis code	105,435

Step 2. We removed special logic from GROUPER and created a modified GROUPER.

Step 3. We reprocessed 105,435 claims with modified GROUPER.

<b>Without Special Logic –105,435 Claims Analyzed</b>	
Number of cases reporting a principal diagnosis from the Principal Diagnosis Is Its Own CC/MCC lists	310,184
Number of cases resulting in different MS-DRG assignment	18,596

To estimate the overall financial impact of removing the special logic from the GROUPER, we calculated the aggregate change in estimated payment for the MS-DRGs by comparing average costs for each MS-DRG affected by the change, before and after removing the special logic. Before removing the special logic in the Version 35 GROUPER, the cases impacted by the special logic had an estimated average payment of \$58 million above the average costs for all the MS-DRGs to which the claim was originally assigned. After removing the special logic in the Version 35 GROUPER, the

18,596 cases impacted by the special logic had an estimated average payment of \$39 million below the average costs for the newly assigned MS-DRGs.

We performed regression analysis to compare the proportion of variance in the MS-DRGs with and without the special logic. The results of the regression analysis showed a slight decrease in variance when the logic was removed. While the decrease itself was not statistically significant (an R-squared of 36.2603 percent after the special logic was removed, compared with an R-squared of 36.2501 percent in the current version 35 GROUPER), we note that the proportion of variance across the MS-DRGs essentially stayed the same, and certainly did not increase, when the special logic was removed.

We further examined the 18,596 claims that were impacted by the special logic in the GROUPER for processing claims containing a code on the Principal Diagnosis Is Its Own CC or MCC Lists. The 18,596 claims were analyzed by the principal diagnosis code and the MS-DRG assigned, resulting in 588 principal diagnosis and MS-DRG combinations or subsets. Of the 588 subsets of cases that utilized the special logic, 556 of the 588 subsets (95 percent) had fewer than 100 cases, 529 of the 588 subsets (90 percent) had fewer than 50 cases, and 489 of the 588 subsets (83 percent) had fewer than 25 cases.

We examined the 32 subsets of cases (5 percent of the 588 subsets) that utilized the special logic and had 100 or more cases. Of the 32 subsets of cases, 18 (56 percent) are similar in terms of average costs and length of stay to the MS-DRG assignment that results when the special logic is removed, and 14 of the 32 subsets of cases (44 percent)

are similar in terms of average costs and length of stay to the MS-DRG assignment that results when the special logic is utilized.

The table below contains examples of four subsets of cases that utilize the special logic, comparing average length of stay and average costs between two MS-DRGs within a base DRG, corresponding to the MS-DRG assigned when the special logic is removed and the MS-DRG assigned when the special logic is utilized. All four subsets of cases involve the principal diagnosis code E11.52 (Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene). There are four subsets of cases in this example because the records involving the principal diagnosis code E11.52 are assigned to four different base DRGs, one medical MS-DRG and three surgical MS-DRGs, depending on the procedure code(s) reported on the claim. All subsets of cases contain more than 100 claims. In three of the four subsets, the cases are similar in terms of average length of stay and average costs to the MS-DRG assignment that results when the special logic is removed, and in one of the four subsets, the cases are similar in terms of average length of stay and average costs to the MS-DRG assignment that results when the special logic is utilized.

As shown in the following table, using ICD-10-CM diagnosis code E11.52 (Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene) as our example, the data findings show four different MS-DRG pairs for which code E11.52 was the principal diagnosis on the claim and where the special logic impacted MS-DRG assignment. For the first MS-DRG pair, we examined MS-DRGs 240 and 241 (Amputation for Circulatory System Disorders Except Upper Limb and Toe with CC and

without CC/MCC, respectively). We found 436 cases reporting diagnosis code E11.52 as the principal diagnosis, with an average length of stay of 5.5 days and average costs of \$11,769. These 436 cases are assigned to MS-DRG 240 with the special logic utilized, and assigned to MS-DRG 241 with the special logic removed. The total number of cases reported in MS-DRG 240 was 7,675, with an average length of stay of 8.3 days and average costs of \$17,876. The total number of cases reported in MS-DRG 241 was 778, with an average length of stay of 5.0 days and average costs of \$10,882. The 436 cases are more similar to MS-DRG 241 in terms of length of stay and average cost and less similar to MS-DRG 240.

For the second MS-DRG pair, we examined MS-DRGs 256 and 257 (Upper Limb and Toe Amputation for Circulatory System Disorders with CC and without CC/MCC, respectively). We found 193 cases reporting ICD-10-CM diagnosis code E11.52 as the principal diagnosis, with an average length of stay of 4.2 days and average costs of \$8,478. These 193 cases are assigned to MS-DRG 256 with the special logic utilized, and assigned to MS-DRG 257 with the special logic removed. The total number of cases reported in MS-DRG 256 was 2,251, with an average length of stay of 6.1 days and average costs of \$11,987. The total number of cases reported in MS-DRG 257 was 115, with an average length of stay of 4.6 days and average costs of \$7,794. These 193 cases are more similar to MS-DRG 257 in terms of average length of stay and average costs and less similar to MS-DRG 256.

For the third MS-DRG pair, we examined MS-DRGs 300 and 301 (Peripheral Vascular Disorders with CC and without CC/MCC, respectively). We found 185 cases

reporting ICD-10-CM diagnosis code E11.52 as the principal diagnosis, with an average length of stay of 3.6 days and average costs of \$5,981. These 185 cases are assigned to MS-DRG 300 with the special logic utilized, and assigned to MS-DRG 301 with the special logic removed. The total number of cases reported in MS-DRG 300 was 29,327, with an average length of stay of 4.1 days and average costs of \$7,272. The total number of cases reported in MS-DRG 301 was 9,611, with an average length of stay of 2.8 days and average costs of \$5,263. These 185 cases are more similar to MS-DRG 301 in terms of average length of stay and average costs and less similar to MS-DRG 300.

For the fourth MS-DRG pair, we examined MS-DRGs 253 and 254 (Other Vascular Procedures with CC and without CC/MCC, respectively). We found 225 cases reporting diagnosis code E11.52 as the principal diagnosis, with an average length of stay of 5.2 days and average costs of \$17,901. These 225 cases are assigned to MS-DRG 253 with the special logic utilized, and assigned to MS-DRG 254 with the special logic removed. The total number of cases reported in MS-DRG 253 was 25,714, with an average length of stay of 5.4 days and average costs of \$18,986. The total number of cases reported in MS-DRG 254 was 12,344, with an average length of stay of 2.8 days and average costs of \$13,287. Unlike the previous three MS-DRG pairs, these 225 cases are more similar to MS-DRG 253 in terms of average length of stay and average costs and less similar to MS-DRG 254.

<b>MS-DRG Pairs for Principal Diagnosis ICD-10-CM Code E11.52 with and without Special MS-DRG Logic</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRGs 240 and 241--Special logic impacted cases with ICD-10-CM code E11.52 as principal diagnosis	436	5.5	\$11,769
MS-DRG 240--All cases	7,675	8.3	\$17,876
<b>MS-DRG 241--All cases</b>	<b>778</b>	<b>5.0</b>	<b>\$10,882</b>
MS-DRGs 253 and 254--Special logic impacted cases with ICD-10-CM E11.52 as principal diagnosis	225	5.2	\$17,901
<b>MS-DRG 253--All cases</b>	<b>25,714</b>	<b>5.4</b>	<b>\$18,986</b>
MS-DRG 254--All cases	12,344	2.8	\$13,287
MS-DRGs 256 and 257--Special logic impacted cases with ICD-10-CM E11.52 as principal diagnosis	193	4.2	\$8,478
MS-DRG 256--All cases	2,251	6.1	\$11,987
<b>MS-DRG 257--All cases</b>	<b>115</b>	<b>4.6</b>	<b>\$7,794</b>
MS-DRGs 300 and 301--Special logic impacted cases with ICD-10-CM E11.52 as principal diagnosis	185	3.6	\$5,981
MS-DRG 300--All cases	29,327	4.1	\$7,272
<b>MS-DRG 301--All cases</b>	<b>9,611</b>	<b>2.8</b>	<b>\$5,263</b>

Based on our analysis of the data, we stated that we believe that there may be more effective indicators of resource utilization than the Principal Diagnosis Is Its Own CC or MCC Lists and the special logic used to assign clinical severity to a principal diagnosis. As stated in the proposed rule and earlier in this discussion, it is no longer necessary to replicate MS-DRG assignment across the ICD-9 and ICD-10 versions of the MS-DRGs. The available ICD-10 data can now be used to evaluate other indicators of resource utilization.

Therefore, as an initial recommendation from the first phase in our comprehensive review of the CC and MCC lists, we proposed to remove the special logic in the GROUPER for processing claims containing a diagnosis code from the Principal Diagnosis Is Its Own CC or MCC Lists, and we proposed to delete the tables containing the lists of principal diagnosis codes, Table 6L.--Principal Diagnosis Is Its Own MCC List and Table 6M.--Principal Diagnosis Is Its Own CC List, from the ICD-10 MS-DRG Definitions Manual for FY 2019. We invited public comments on our proposals.

Comment: Commenters supported the proposed deletion of the Principal Diagnosis Is Its Own CC or MCC logic. One commenter stated that the lists were created to facilitate replication of the ICD-9 based MS-DRGs and are an artifact of the ICD-10 transitions. Another commenter recommended removing some of the conditions that are currently on the lists but expressed concern that eliminating the logic completely could impact the ability to measure a patient's severity of illness. One commenter noted that CMS described its internal comprehensive review and analysis that were conducted, which provided some level of insight for the proposal; however, the overarching comment was that CMS believed there were more effective indicators of resource utilization. Other commenters disagreed with CMS' proposal to "globally" remove the Principal Diagnosis Is Its Own CC or MCC logic. A few commenters stated that a more detailed analysis, consistent with the comprehensive CC/MCC analysis approach conducted for severity level changes, should occur. One commenter recommended that the logic described as part of the MS-DRG Conversion Project with the MCC and CC translations from ICD-9 to ICD-10 be considered. Another commenter acknowledged

that CMS is no longer attempting to replicate the ICD-9 based MS-DRG GROUPER logic. However, this commenter noted that the conditions represented by the ICD-10-CM combination codes are clinically the same conditions that were CCs or MCCs under ICD-9-CM.

Response: We appreciate the commenters' support. With regard to the commenter who recommended removing some of the conditions that are currently on the lists but expressed concern that eliminating the logic completely could impact the ability to measure a patient's severity of illness, we disagree because, in general, the description of a diagnosis code itself describes or implies a certain level of severity. In addition, there are other factors to consider besides the principal diagnosis when determining severity of illness and resource utilization. In response to the other commenters who disagreed with our proposal to remove the Principal Diagnosis Is Its Own CC or MCC logic and recommended that we perform an analysis consistent with the comprehensive CC/MCC analysis, we note that such an analysis would not be conclusive because the purpose of the comprehensive CC/MCC analysis is to evaluate the impact in resource use for patients with conditions reported as secondary diagnoses. We believe that the analysis that was performed and discussed in the proposed rule was appropriate for assessing if we should maintain the special logic that currently exists for assigning a severity level to a principal diagnosis, as well as to assess whether it would be appropriate to propose removing the special logic and utilize alternate methods to evaluate what should be considered a complex principal diagnosis for MS-DRG assignment purposes. As stated in the proposed rule (83 FR 20237), CMS has

historically used clinical judgment combined with data analysis to assign a principal diagnosis describing a complex or severe condition to the appropriate MS-DRG. We also note that, as stated in the proposed rule (83 FR 20238), the findings from our analysis of the 18,596 claims that were impacted by the special logic in the GROUPER for processing claims containing a code on the Principal Diagnosis Is Its Own CC or MCC Lists demonstrated that 556 of the 588 subsets had fewer than 100 cases. The low number of cases means that if the special logic had been proposed for the first time under ICD-10, 95 percent of the diagnosis codes that were responsible for 95 percent of the cases using the special logic would not have met the criteria for proposing a change to their severity level. With regard to the commenter who stated that the conditions represented by the ICD-10-CM combination codes are clinically the same conditions that were CCs or MCCs under ICD-9-CM, we note that combination diagnosis codes are a feature of the classification of both ICD-9-CM and ICD-10-CM. The majority of the combination diagnosis codes in ICD-9-CM are also combination codes in ICD-10-CM. The current list of ICD-10-CM codes that are included in the special logic is a result of the fact that the codes were classified differently in ICD-9-CM than in ICD-10-CM. Diagnoses represented as two separate codes under ICD-9-CM were represented in a combination code under ICD-10-CM. Codes that were combination codes in both ICD-9-CM and ICD-10-CM do not have any special severity logic applied, regardless of the clinical severity of the conditions described, or the increased use of resources that could be associated with a particular combination principal diagnosis. As a result, the categorization of ICD-10-CM codes into lists wherein the principal diagnosis is its own

CC or MCC is based not on a systematic clinical evaluation of the severity of illness of patients with these combination diagnosis codes, or on a systematic evaluation of data containing these combination diagnosis codes used as principal diagnosis, but on a collection of codes selected exclusively because there were structural differences between the classification scheme in ICD-9-CM versus ICD-10-CM. Now that ICD-10 coded data are available, it can be used to evaluate other indicators of resource utilization, along with clinical judgment.

After consideration of the public comments we received, we are finalizing our proposal to remove the special logic in the GROUPER for processing claims containing a code on the Principal Diagnosis Is Its Own CC or MCC Lists as an initial step in our first phase of the comprehensive review of the CC and MCC lists. We also are finalizing our proposal to delete the tables containing the lists of principal diagnosis codes, Table 6L.--Principal Diagnosis Is Its Own MCC List and Table 6M.--Principal Diagnosis Is Its Own CC List, from the ICD-10 MS-DRG Definitions Manual Version 36, effective October 1, 2018.

d. CC Exclusions List for FY 2019

In the September 1, 1987 final notice (52 FR 33143) concerning changes to the DRG classification system, we modified the GROUPER logic so that certain diagnoses included on the standard list of CCs would not be considered valid CCs in combination with a particular principal diagnosis. We created the CC Exclusions List for the following reasons: (1) to preclude coding of CCs for closely related conditions; (2) to preclude duplicative or inconsistent coding from being treated as CCs; and (3) to ensure

that cases are appropriately classified between the complicated and uncomplicated DRGs in a pair.

In the May 19, 1987 proposed notice (52 FR 18877) and the September 1, 1987 final notice (52 FR 33154), we explained that the excluded secondary diagnoses were established using the following five principles:

- Chronic and acute manifestations of the same condition should not be considered CCs for one another;
- Specific and nonspecific (that is, not otherwise specified (NOS)) diagnosis codes for the same condition should not be considered CCs for one another;
- Codes for the same condition that cannot coexist, such as partial/total, unilateral/bilateral, obstructed/unobstructed, and benign/malignant, should not be considered CCs for one another;
- Codes for the same condition in anatomically proximal sites should not be considered CCs for one another; and
- Closely related conditions should not be considered CCs for one another.

The creation of the CC Exclusions List was a major project involving hundreds of codes. We have continued to review the remaining CCs to identify additional exclusions and to remove diagnoses from the master list that have been shown not to meet the definition of a CC. We refer readers to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50541 through 50544) for detailed information regarding revisions that were made to the CC and CC Exclusion Lists under the ICD-9-CM MS-DRGs.

The ICD-10 MS-DRGs Version 35 CC Exclusion List is included as Appendix C in the ICD-10 MS-DRG Definitions Manual, which is available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>, and includes two lists identified as Part 1 and Part 2. Part 1 is the list of all diagnosis codes that are defined as a CC or MCC when reported as a secondary diagnosis. If the code designated as a CC or MCC is allowed with all principal diagnoses, the phrase “NoExcl” (for no exclusions) follows the CC or MCC designation. For example, ICD-10-CM diagnosis code A17.83 (Tuberculous neuritis) has this “NoExcl” entry. For all other diagnosis codes on the list, a link is provided to a collection of diagnosis codes which, when used as the principal diagnosis, would cause the CC or MCC diagnosis to be considered as a non-CC. Part 2 is the list of diagnosis codes designated as a MCC only for patients discharged alive; otherwise, they are assigned as a non-CC.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20239), for FY 2019, we proposed changes to the ICD-10 MS-DRGs Version 36 CC Exclusion List. Therefore, we developed Table 6G.1.--Proposed Secondary Diagnosis Order Additions to the CC Exclusions List--FY 2019; Table 6G.2.--Proposed Principal Diagnosis Order Additions to the CC Exclusions List--FY 2019; Table 6H.1.--Proposed Secondary Diagnosis Order Deletions to the CC Exclusions List--FY 2019; and Table 6H.2.—Proposed Principal Diagnosis Order Deletions to the CC Exclusions List--FY 2019. For Table 6G.1, each secondary diagnosis code proposed for addition to the CC Exclusion List is shown with an asterisk and the principal diagnoses proposed to exclude the secondary diagnosis code

are provided in the indented column immediately following it. For Table 6G.2, each of the principal diagnosis codes for which there is a CC exclusion is shown with an asterisk and the conditions proposed for addition to the CC Exclusion List that will not count as a CC are provided in an indented column immediately following the affected principal diagnosis. For Table 6H.1, each secondary diagnosis code proposed for deletion from the CC Exclusion List is shown with an asterisk followed by the principal diagnosis codes that currently exclude it. For Table 6H.2, each of the principal diagnosis codes is shown with an asterisk and the proposed deletions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis. Tables 6G.1., 6G.2., 6H.1., and 6H.2. associated with the proposed rule are available via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

To identify new, revised and deleted diagnosis and procedure codes, for FY 2019, we developed Table 6A.--New Diagnosis Codes, Table 6B.--New Procedure Codes, Table 6C.--Invalid Diagnosis Codes, Table 6D.--Invalid Procedure Codes, Table 6E.--Revised Diagnosis Code Titles, and Table 6F.--Revised Procedure Code Titles for the proposed rule and this final rule.

These tables are not published in the Addendum to the proposed rule or the final rule but are available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html> as described in section VI. of the Addendum to this final rule. As discussed in section II.F.18. of the preamble of this final rule, the code

titles are adopted as part of the ICD-10 (previously ICD-9-CM) Coordination and Maintenance Committee process. Therefore, although we publish the code titles in the IPPS proposed and final rules, they are not subject to comment in the proposed or final rules.

In the FY 2019 IPPS/LTCH PPS proposed rule, we invited public comments on the MDC and MS-DRG assignments for the new diagnosis and procedure codes as set forth in Table 6A.—New Diagnosis Codes and Table 6B.—New Procedure Codes. In addition, we invited public comments on the proposed severity level designations for the new diagnosis codes as set forth in Table 6A. and the proposed O.R. status for the new procedure codes as set forth in Table 6B.

Comment: One commenter addressed the proposed MS-DRG assignment for ICD-10-CM diagnosis code K35.20 (Acute appendicitis with generalized peritonitis, without abscess) that was included in Table 6A.--New Diagnosis Codes associated with the proposed rule. The commenter included the following codes that describe conditions involving appendicitis with peritonitis, abscess, perforation and gangrene.

<b>ICD-10-CM Code</b>	<b>Code Description</b>	<b>Proposed MS-DRG</b>
K35.20	Acute appendicitis with generalized peritonitis, without abscess	371, 372, 373
K35.21	Acute appendicitis with generalized peritonitis, with abscess	338, 339, 340 371, 372, 373
K35.30	Acute appendicitis with localized peritonitis, without perforation or gangrene	371, 372, 373
K35.31	Acute appendicitis with localized peritonitis and gangrene, without perforation	371, 372, 373
K35.32	Acute appendicitis with perforation and localized peritonitis, without abscess	338, 339, 340 371, 372, 373
K35.33	Acute appendicitis with perforation and localized peritonitis, with abscess	338, 339, 340 371, 372, 373

ICD-10-CM Code	Code Description	Proposed MS-DRG
K35.890	Other acute appendicitis without perforation or gangrene	371, 372, 373
K35.891	Other acute appendicitis without perforation, with gangrene	371, 372, 373

The commenter stated that the proposed MS-DRG assignment for diagnosis code K35.20 is inappropriate and urged CMS to assign additional MS-DRGs and revise Table 6A. Specifically, the commenter expressed concern that MS-DRGs 371, 372, and 373 (Major Gastrointestinal Disorders and Peritoneal Infections with MCC, with CC, and without CC/MCC, respectively) were the only MS-DRGs assigned to diagnosis code K35.20 and requested that MS-DRGs 338, 339, and 340 (Appendectomy with Complicated Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) also be assigned. The commenter questioned why CMS only assigned MS-DRGs 371, 372, and 373 for diagnosis code K35.20 when diagnosis code K35.32 was assigned to MS-DRGs 338, 339, and 340 in addition to MS-DRGs 371, 372, and 373. The commenter stated that the FY 2019 ICD-10-CM Tabular List of Diseases and Injuries indicates that codes at the new subcategory K35.2 include a ruptured or perforated appendix, which is a complicating diagnosis and requires additional resources. The commenter expressed concern that the proposed MS-DRG assignment for diagnosis code K35.20 does not appropriately reflect the complications of the underlying disease or resources associated with acute appendicitis with generalized peritonitis. The commenter also noted that studies of patients admitted with appendicitis define complicated appendicitis as the presence of either generalized peritonitis due to perforated

appendicitis or appendicular abscess. The commenter further noted that an appendix may perforate and cause generalized peritonitis without abscess if the perforation is walled off from the remainder of the peritoneal cavity because of its retroperitoneal location or by loops of small intestine or omentum.

Response: We note that the predecessor code for new diagnosis code K35.20 is diagnosis code K35.2 (Acute appendicitis with generalized peritonitis), which is currently assigned to MS-DRGs 338, 339, 340, 371, 372, and 373. Diagnosis code K35.2 was subdivided into diagnosis codes K35.20 and K35.21. In assigning the proposed MS-DRGs for these new diagnosis codes, we considered the predecessor code MS-DRG assignment and the descriptions of the new diagnosis codes. Our clinical advisors determined that diagnosis code K35.21 “with abscess” was more appropriate to assign to MS-DRGs 338, 339, and 340 in addition to MS-DRGs 371, 372, and 373 versus diagnosis code K35.20 “without abscess”. The degree and severity of the peritonitis in a patient with acute appendicitis can vary greatly. However, not all patients with peritonitis develop an abscess. While we agree that peritonitis is a serious condition when it develops in a patient with acute appendicitis, we also believe that, clinically, an abscess presents an even greater risk of complications that requires more resources as discussed in section II.F.15.b. of the preamble of this final rule with regard to the severity level designation.

We also consulted with the staff at the Centers for Disease Control’s (CDC’s) National Center for Health Statistics (NCHS) because NCHS has the lead responsibility for maintaining the ICD-10-CM diagnosis codes. The NCHS’ staff acknowledged the

clinical concerns of the commenter based on the manner in which diagnosis codes K35.2 and K35.3 were expanded and confirmed that they will consider further review of these newly expanded codes with respect to the clinical concepts.

Therefore, we maintain that the proposed MS-DRG assignment for diagnosis code K35.20 as shown in Table 6A is appropriate. Because the diagnosis codes that the commenter submitted in its comments are new, effective October 1, 2018, we do not yet have any claims data. We will continue to monitor these codes as data become available.

After consideration of the public comments we received, we are finalizing our proposal to assign diagnosis code K35.20 to MS-DRGs 371, 372, and 373 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

Comment: One commenter recommended that the following new diagnosis codes that were included in Table 6A.--New Diagnosis Codes--FY 2019, be designated as a CC in the ICD-10-CM classification.

ICD-10-CM Code	Code Description
K61.31	Horseshoe abscess
K61.39	Other ischiorectal abscess
K61.5	Suprlevator abscess
K82.A1	Gangrene of gallbladder in cholecystitis
O86.00	Infection of obstetric surgical wound, unspecified
O86.01	Infection of obstetric surgical wound, superficial incisional site
O86.02	Infection of obstetric surgical wound, deep incisional site
O86.03	Infection of obstetric surgical wound, organ and space site
O86.09	Infection of obstetric surgical wound, other surgical site

According to the commenter, abscesses, postoperative infections, and gangrene of gallbladder warrant the CC designation because they are acute conditions and require

antibiotics or surgical treatment and impact the length of stay. The commenter noted that, currently, diagnosis codes K61.3 (Ischiorectal abscess) and K61.4 (Intrasphincteric abscess) are designated as CCs. The commenter also noted that gangrene of gallbladder classifies to acute cholecystitis, which is a CC, and recommended that the codes listed in the above table all be designated as CCs.

Response: We appreciate the commenter's feedback on the proposed severity level designations of the diagnosis codes that were included in Table 6A.--New Diagnosis Codes--FY 2019. The commenter is correct that, currently, diagnosis codes K61.3 and K61.4 are designated as CCs. However, our clinical advisors reviewed diagnosis codes K61.31, K61.39, and K61.5 and continue to support maintaining the proposed non-CC designation because they do not agree from a clinical perspective that these conditions warrant a CC designation or significantly impact resource utilization as a secondary diagnosis. Specifically, our clinical advisors believe that these diagnosis codes described conditions that can range in severity and subsequently, the treatment that is rendered. With regard to the commenter's statement that abscesses, postoperative infections, and gangrene of gallbladder warrant the CC designation because they are acute conditions and require antibiotics or surgical treatment and impact the length of stay, we note that there are various types of abscesses and postoperative infections with varying levels of severity that do not always warrant surgical intervention.

With regard to the commenter's statement that gangrene of gallbladder classifies to acute cholecystitis which is a CC, we acknowledge that, currently, diagnosis code K81.0 (Acute cholecystitis) is a CC and has an inclusion term for gangrene of

gallbladder. However, the new code description does not include the term “acute”. Upon review of code K82.A1, our clinical advisors continue to support maintaining the proposed non-CC designation because they do not agree from a clinical perspective that this condition warrants a CC designation or significantly impacts resource utilization as a secondary diagnosis as the primary diagnosis likely is a more significant contributor to resource utilization. With regard to the codes describing infection of obstetrical wound of varying degrees and depths, the predecessor code O86.0 (Infection of obstetric wound) is currently classified as a non-CC and our clinical advisors agreed that, in the absence of data for the new codes, they are appropriately designated as non-CCs.

After consideration of the public comments we received, we are finalizing our proposed severity level assignments for the above listed diagnosis codes under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

We also are making available on the CMS website at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html> the following final tables associated with this final rule:

- Table 6A.—New Diagnosis Codes—FY 2019;
- Table 6B.—New Procedure Codes—FY 2019;
- Table 6C.—Invalid Diagnosis Codes—FY 2019;
- Table 6D.—Invalid Procedure Codes—FY 2019;
- Table 6E.—Revised Diagnosis Code Titles—FY 2019;
- Table 6F.—Revised Procedure Code Titles—FY 2019;

- Table 6G.1.—Secondary Diagnosis Order Additions to the CC Exclusions List--FY 2019;
- Table 6G.2.—Principal Diagnosis Order Additions to the CC Exclusions List--FY 2019;
- Table 6H.1.—Secondary Diagnosis Order Deletions to the CC Exclusions List--FY 2019;
- Table 6H.2.—Principal Diagnosis Order Deletions to the CC Exclusions List--FY 2019;
- Table 6I.1.—Additions to the MCC List--FY 2019;
- Table 6I.2.—Deletions to the MCC List--FY 2019;
- Table 6J.1.—Additions to the CC List--FY 2019; and
- Table 6J.2.—Deletions to the CC List --FY 2019.

We note that, as discussed in section II.F.15.c. of the preamble of this final rule, we proposed, and in this final rule are finalizing, to delete Table 6L. and Table 6M. from the ICD-10 MS-DRG Definitions Manual for FY 2019.

## 16. Comprehensive Review of CC List for FY 2019

### a. Overview of Comprehensive CC/MCC Analysis

In the FY 2008 IPPS/LTCH PPS final rule (72 FR 47159), we described our process for establishing three different levels of CC severity into which we would subdivide the diagnosis codes. The categorization of diagnoses as an MCC, a CC, or a non-CC was accomplished using an iterative approach in which each diagnosis was evaluated to determine the extent to which its presence as a secondary diagnosis resulted

in increased hospital resource use. We refer readers to the FY 2008 IPPS/LTCH PPS final rule (72 FR 47159) for a complete discussion of our approach. Since this comprehensive analysis was completed for FY 2008, we have evaluated diagnosis codes individually when receiving requests to change the severity level of specific diagnosis codes. However, given the transition to ICD-10-CM and the significant changes that have occurred to diagnosis codes since this review, we believe it is necessary to conduct a comprehensive analysis once again. We have begun this analysis and will discuss our findings in future rulemaking. We are currently using the same methodology utilized in FY 2008 and described below to conduct this analysis.

For each secondary diagnosis, we measured the impact in resource use for the following three subsets of patients:

- (1) Patients with no other secondary diagnosis or with all other secondary diagnoses that are non-CCs.
- (2) Patients with at least one other secondary diagnosis that is a CC but none that is an MCC.
- (3) Patients with at least one other secondary diagnosis that is an MCC.

Numerical resource impact values were assigned for each diagnosis as follows:

<b>Value</b>	<b>Meaning</b>
0	Significantly below expected value for the non-CC subgroup
1	Approximately equal to expected value for the non-CC subgroup
2	Approximately equal to expected value for the CC subgroup
3	Approximately equal to expected value for the MCC subgroup
4	Significantly above the expected value for the MCC subgroup

Each diagnosis for which Medicare data were available was evaluated to determine its impact on resource use and to determine the most appropriate CC subclass (non-CC, CC, or MCC) assignment. In order to make this determination, the average cost for each subset of cases was compared to the expected cost for cases in that subset. The following format was used to evaluate each diagnosis:

Code	Diagnosis	Cnt1	C1	Cnt2	C2	Cnt3	C3
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Count (Cnt) is the number of patients in each subset and C1, C2, and C3 are a measure of the impact on resource use of patients in each of the subsets. The C1, C2, and C3 values are a measure of the ratio of average costs for patients with these conditions to the expected average cost across all cases. The C1 value reflects a patient with no other secondary diagnosis or with all other secondary diagnoses that are non-CCs. The C2 value reflects a patient with at least one other secondary diagnosis that is a CC but none that is a major CC. The C3 value reflects a patient with at least one other secondary diagnosis that is a major CC. A value close to 1.0 in the C1 field would suggest that the code produces the same expected value as a non-CC diagnosis. That is, average costs for the case are similar to the expected average costs for that subset and the diagnosis is not expected to increase resource usage. A higher value in the C1 (or C2 and C3) field suggests more resource usage is associated with the diagnosis and an increased likelihood that it is more like a CC or major CC than a non-CC. Thus, a value close to 2.0 suggests the condition is more like a CC than a non-CC but not as significant in resource usage as an MCC. A value close to 3.0 suggests the condition is expected to consume resources

more similar to an MCC than a CC or non-CC. For example, a C1 value of 1.8 for a secondary diagnosis means that for the subset of patients who have the secondary diagnosis and have either no other secondary diagnosis present, or all the other secondary diagnoses present are non-CCs, the impact on resource use of the secondary diagnoses is greater than the expected value for a non-CC by an amount equal to 80 percent of the difference between the expected value of a CC and a non-CC (that is, the impact on resource use of the secondary diagnosis is closer to a CC than a non-CC).

These mathematical constructs are used as guides in conjunction with the judgment of our clinical advisors to classify each secondary diagnosis reviewed as an MCC, CC or non-CC. Our clinical panel reviews the resource use impact reports and suggests modifications to the initial CC subclass assignments when clinically appropriate.

b. Requested Changes to Severity Levels

(1) Human Immunodeficiency Virus [HIV] Disease

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20241), we received a request that we consider changing the severity level of ICD-10-CM diagnosis code B20 (Human immunodeficiency virus [HIV] disease) from an MCC to a CC. We used the approach outlined above to evaluate this request. The table below contains the data that were evaluated for this request.

<b>ICD-10-CM Diagnosis Code</b>	<b>Cnt1</b>	<b>C1</b>	<b>Cnt2</b>	<b>C2</b>	<b>Cnt3</b>	<b>C3</b>	<b>Current CC Subclass</b>	<b>Proposed CC Subclass</b>
B20 (Human immunodeficiency virus [HIV] disease)	2,918	0.9946	8,938	2.1237	11,479	3.0960	MCC	CC

We stated in the proposed rule that while the data did not strongly suggest that the categorization of HIV as an MCC was inaccurate, our clinical advisors indicated that, for many patients with HIV disease, symptoms are well controlled by medications. Our clinical advisors stated that if these patients have an HIV-related complicating disease, that complicating disease would serve as a CC or an MCC. Therefore, they advised us that ICD-10-CM diagnosis code B20 is more similar to a CC than an MCC. Based on the data results and the advice of our clinical advisors, we proposed to change the severity level of ICD-10-CM diagnosis code B20 from an MCC to a CC.

Comment: Commenters opposed the proposal to change the severity level for ICD-10-CM diagnosis code B20 from an MCC to a CC. The commenters stated that the change should not be made without strong supporting empirical data, referencing the language in the proposed rule that indicated that the data did not strongly suggest that the categorization of HIV as an MCC was inaccurate. One commenter indicated that patients with CD4 counts of less than 100, or elevated viral loads, would need more laboratory tests, more imaging, and a higher level of care even if they are in the hospital for a non-HIV related condition. This commenter suggested that if diagnosis code B20 is changed to a CC, CMS develop distinct codes for patients with AIDS based on their level of CD4 and whether viral loads are suppressed.

Response: While we stated in the proposed rule that the data did not strongly suggest correlation of a secondary diagnosis code of B20 with a severity level of an MCC was inaccurate, the data also did not definitively support maintaining a severity level of an MCC. While we understand that HIV is a serious disease that causes significant

chronic illness and can lead to serious complications, we note that when a patient is admitted for a non-HIV related condition, our clinical advisors do not believe that the secondary diagnosis of HIV would be expected to result in the additional resources associated with an MCC. As explained in the proposed rule, our clinical advisors believe that, for many patients with HIV disease, symptoms are well controlled by medications, and if these patients have an HIV-related complicating disease, that complicating disease would serve as a CC or an MCC. For these reasons, our clinical advisors continue to believe that ICD-10-CM diagnosis code B20 is more accurately characterized as a CC.

As discussed in section II.F.18. of the preamble of this final rule, requests for new ICD-10-CM diagnosis codes are discussed at the ICD-10 Coordination and Maintenance Committee meetings. We refer the commenter to the National Center for Health Statistics (NCHS) website at [https://www.cdc.gov/nchs/icd/icd10\\_maintenance.html](https://www.cdc.gov/nchs/icd/icd10_maintenance.html) for further information regarding these meetings and the process for how to request code updates.

After consideration of the public comments we received, we are finalizing our proposal to change the severity level of diagnosis code of B20 from an MCC to a CC.

#### (2) Acute Respiratory Distress Syndrome

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20241), we also received a request to change the severity level for ICD-10-CM diagnosis code J80 (Acute respiratory distress syndrome) from a CC to a MCC. We used the approach outlined above to evaluate this request. The following table contains the data that were evaluated for this request.

<b>ICD-10-CM Diagnosis Code</b>	<b>Cnt1</b>	<b>C1</b>	<b>Cnt2</b>	<b>C2</b>	<b>Cnt3</b>	<b>C3</b>	<b>Current CC Subclass</b>	<b>Proposed CC Subclass</b>
J80 (Acute respiratory distress syndrome)	1,840	1.7704	6,818	2.5596	18,376	3.3428	CC	MCC

We stated in the proposed rule that the data suggest that the resources involved in caring for a patient with this condition are 77 percent greater than expected when the patient has either no other secondary diagnosis present or all the other secondary diagnoses present are non-CCs. The resources are 56 percent greater than expected when reported in conjunction with another secondary diagnosis that is a CC, and 34 percent greater than expected when reported in conjunction with another secondary diagnosis code that is an MCC. Our clinical advisors agreed that the resources required to care for a patient with this secondary diagnosis are consistent with those of an MCC. Therefore, we proposed to change the severity level of ICD-10-CM diagnosis code J80 from a CC to an MCC.

Comment: Commenters supported the proposal to change the severity level of ICD-10-CM diagnosis code J80 from a CC to an MCC.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to change the severity level of ICD-10-CM diagnosis code J80 from a CC to an MCC.

(3) Encephalopathy

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20241), we also received a request to change the severity level for ICD-10-CM diagnosis code G93.40 (Encephalopathy, unspecified) from an MCC to a non-CC. The requestor pointed out that the nature of the encephalopathy or its underlying cause should be coded. The requestor also noted that unspecified heart failure is a non-CC. We used the approach outlined earlier to evaluate this request. The following table contains the data that were evaluated for this request.

<b>ICD-10-CM Diagnosis Code</b>	<b>Cnt1</b>	<b>C1</b>	<b>Cnt2</b>	<b>C2</b>	<b>Cnt3</b>	<b>C3</b>	<b>Current CC Subclass</b>	<b>Proposed CC Subclass</b>
G93.40 (Encephalopathy, unspecified)	16,306	1.840	80,222	1.8471	139,066	2.4901	MCC	MCC

We stated in the proposed rule that the data suggest that the resources involved in caring for a patient with this condition are 84 percent greater than expected when the patient has either no other secondary diagnosis present or all the other secondary diagnoses present are non-CCs. We stated in the proposed rule that the resources are 15 percent lower than expected when reported in conjunction with another secondary diagnosis that is a CC, and 49 percent lower than expected when reported in conjunction with another secondary diagnosis code that is an MCC. The sentence should have read as follows: The resources are 15 percent lower than expected when reported in conjunction with another secondary diagnosis that is a CC, and 51 percent lower than expected when reported in conjunction with another secondary diagnosis code that is an MCC. We noted that the pattern observed in resource use for the condition of unspecified heart

failure (ICD-10-CM diagnosis code I50.9) differs from that of unspecified encephalopathy. Our clinical advisors reviewed this request and agreed that, from a clinical standpoint, the resources involved in caring for a patient with this condition are aligned with those of an MCC. Therefore, we did not propose a change to the severity level for ICD-10-CM diagnosis code G93.40.

Comment: Several commenters supported the proposal to maintain the severity level for ICD-10-CM diagnosis code G93.40 as an MCC. One commenter opposed the proposal, stating that unspecified encephalopathy is poorly defined, not all specified encephalopathies are MCCs, and the MCC status creates an incentive for coding personnel to not pursue specificity of encephalopathy which could lead to a lower relative weight.

Response: We appreciate the commenters' support. After reviewing the rationale provided by the commenter who opposed our proposal, we concur with the commenter that unspecified encephalopathy is poorly defined, not all encephalopathies are MCCs, and the MCC status creates an incentive for coding personnel to not pursue specificity of encephalopathy. For these reason, our clinical advisors agree that it is appropriate to change the severity level from an MCC to a CC.

After consideration of the public comments we received, we are changing the severity level for ICD-10-CM diagnosis code G93.40 from an MCC to a CC.

#### (4) End-Stage Heart Failure and Hepatic Encephalopathy

Comment: One commenter stated that ICD-10-CM code I50.84 (End-stage heart failure) should be assigned the severity level of a CC and that hepatic encephalopathy

should be assigned the severity level of an MCC. The commenter did not provide the specific ICD-10-CM diagnosis codes that describe hepatic encephalopathy.

Response: Because ICD-10-CM code I50.84 and the codes that describe hepatic encephalopathy referred to by the commenter are newly created codes, we do not yet have data with which to evaluate the commenter's request. We will consider these diagnosis codes during our ongoing comprehensive CC/MCC analysis once data become available.

After consideration of the public comment received, we are not changing the severity level of ICD-10-CM code I50.84 or the ICD-10-CM codes describing hepatic encephalopathy for FY 2019.

#### 17. Review of Procedure Codes in MS DRGs 981 through 983 and 987 through 989

Each year, we review cases assigned to MS-DRGs 981, 982, and 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) and MS-DRGs 987, 988, and 989 (Nonextensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) to determine whether it would be appropriate to change the procedures assigned among these MS-DRGs. MS-DRGs 981 through 983 and 987 through 989 are reserved for those cases in which none of the O.R. procedures performed are related to the principal diagnosis. These MS-DRGs are intended to capture atypical cases, that is, those cases not occurring with sufficient frequency to represent a distinct, recognizable clinical group.

a. Moving Procedure Codes from MS-DRGs 981 through 983 or MS-DRGs 987 through 989 into MDCs

We annually conduct a review of procedures producing assignment to MS-DRGs 981 through 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) or MS-DRGs 987 through 989 (Nonextensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) on the basis of volume, by procedure, to see if it would be appropriate to move procedure codes out of these MS-DRGs into one of the surgical MS-DRGs for the MDC into which the principal diagnosis falls. The data are arrayed in two ways for comparison purposes. We look at a frequency count of each major operative procedure code. We also compare procedures across MDCs by volume of procedure codes within each MDC.

We identify those procedures occurring in conjunction with certain principal diagnoses with sufficient frequency to justify adding them to one of the surgical MS-DRGs for the MDC in which the diagnosis falls. Based on the results of our review of the claims data from the September 2017 update of the FY 2017 MedPAR file, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20242), we did not propose to move any procedures from MS-DRGs 981 through 983 or MS-DRGs 987 through 989 into one of the surgical MS-DRGs for the MDC into which the principal diagnosis is assigned.

Comment: One commenter identified two scenarios that involve some cases that are grouping to MS-DRGs 981 through 983 and MS-DRGs 987 through 989. The

commenter stated that these grouping issues should be addressed by CMS and provided specific examples with a combination of several codes.

Response: We appreciate the commenter bringing these issues to our attention. However, we were unable to fully evaluate these scenarios for consideration in FY 2019. We intend to review and consider these items for FY 2020 as part of our ongoing analysis of the unrelated procedure MS-DRGs. As stated in section II.F.1.b. of the preamble of this final rule, we encourage individuals with comments about MS-DRG classification issues to submit these comments no later than November 1 of each year so that they can be considered for possible inclusion in the annual proposed rule.

After consideration of the public comments we received, we are not moving any procedures from MS-DRGs 981 through 983 or MS-DRGs 987 through 989 into one of the surgical MS-DRGs for the MDC into which the principal diagnosis is assigned for FY 2019.

b. Reassignment of Procedures among MS-DRGs 981 through 983 and 987 through 989

We also review the list of ICD-10-PCS procedures that, when in combination with their principal diagnosis code, result in assignment to MS-DRGs 981 through 983, or 987 through 989, to ascertain whether any of those procedures should be reassigned from one of those two groups of MS-DRGs to the other group of MS-DRGs based on average costs and the length of stay. We look at the data for trends such as shifts in treatment practice or reporting practice that would make the resulting MS-DRG assignment illogical. If we find these shifts, we would propose to move cases to keep the MS-DRGs clinically similar or to provide payment for the cases in a similar manner.

Generally, we move only those procedures for which we have an adequate number of discharges to analyze the data.

Based on the results of our review of the September 2017 update of the FY 2017 MedPAR file, we also proposed to maintain the current structure of MS-DRGs 981 through 983 and MS-DRGs 987 through 989.

Comment: One commenter recommended that CMS classify the insertion and revision of intracardiac pacemakers as discussed in section II.F.4.a. of the proposed rule (83 FR 20204) as extensive O.R. procedures (MS-DRG 981 through 983). The commenter performed its own analysis where the results demonstrated the average costs of the intracardiac pacemakers were higher than the average costs of cases in MS-DRGs 981 through 983.

Response: We are unclear as to the nature of the commenter's request, as the intracardiac pacemaker procedure codes are already designated as extensive O.R. procedures in the GROUPER logic, as discussed in section II.F.4.a. of the preamble of this final rule

After consideration of the public comments we received, we are finalizing our proposal to maintain the current structure of MS-DRGs 981 through 983 and MS-DRGs 987 through 989 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

c. Adding Diagnosis or Procedure Codes to MDCs

We received a request recommending that CMS reassign cases for congenital pectus excavatum (congenital depression of the sternum or concave chest) when reported with a procedure describing repositioning of the sternum (the Nuss

procedure) from MS-DRGs 981, 982, and 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) to MS-DRGs 515, 516, and 517 (Other Musculoskeletal System and Connective Tissue O.R. Procedures with MCC, with CC, and without CC/MCC, respectively).

ICD-10-CM diagnosis code Q67.6 (Pectus excavatum) is reported for this congenital condition and is currently assigned to MDC 4 (Diseases and Disorders of the Respiratory System). ICD-10-PCS procedure code 0PS044Z (Reposition sternum with internal fixation device, percutaneous endoscopic approach) may be reported to identify the Nuss procedure and is currently assigned to MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue) in MS-DRGs 515, 516, and 517. The requester noted that *acquired* pectus excavatum (ICD-10-CM diagnosis code M95.4) groups to MS-DRGs 515, 516, and 517 when reported with a ICD-10-PCS procedure code describing repositioning of the sternum and requested that cases involving diagnoses describing *congenital* pectus excavatum also group to those MS-DRGs when reported with a ICD-10-PCS procedure code describing repositioning of the sternum.

Our analysis of this grouping issue confirmed that, when pectus excavatum (ICD-10-CM diagnosis code Q67.6) is reported as a principal diagnosis with a procedure such as the Nuss procedure (ICD-10-PCS procedure code 0PS044Z), these cases group to MS-DRGs 981, 982, and 983. The reason for this grouping is because whenever there is a surgical procedure reported on a claim, which is unrelated to the MDC to which the case was assigned based on the principal diagnosis, it results in an

MS-DRG assignment to a surgical class referred to as “unrelated operating room procedures.” In the example provided, because the ICD-10-CM diagnosis code Q67.6 describing pectus excavatum is classified to MDC 4 and the ICD-10-PCS procedure code 0PS044Z is classified to MDC 8, the GROUPER logic assigns this case to the “unrelated operating room procedures” set of MS-DRGs.

During our review of ICD-10-CM diagnosis code Q67.6, we also reviewed additional ICD-10-CM diagnosis codes in the Q65 through Q79 code range to determine if there might be other conditions classified to MDC 4 that describe congenital malformations and deformities of the musculoskeletal system. We identified the following six ICD-10-CM diagnosis codes:

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Q67.7	Pectus carinatum
Q76.6	Other congenital malformations of ribs
Q76.7	Congenital malformation of sternum
Q76.8	Other congenital malformations of bony thorax
Q76.9	Congenital malformation of bony thorax, unspecified
Q77.2	Short rib syndrome

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20243), we proposed to reassign ICD-10-CM diagnosis code Q67.6, as well as the additional six ICD-10-CM diagnosis codes above describing congenital musculoskeletal conditions, from MDC 4 to MDC 8 where other related congenital conditions that correspond to the musculoskeletal system are classified, as discussed further below.

We identified other related ICD-10-CM diagnosis codes that are currently assigned to MDC 8 in categories Q67 (Congenital musculoskeletal deformities of

head, face, spine and chest), Q76 (Congenital malformations of spine and bony thorax), and Q77 (Osteochondrodysplasia with defects of growth of tubular bones and spine) that are listed in the following table.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Q67.0	Congenital facial asymmetry
Q67.1	Congenital compression facies
Q67.2	Dolichocephaly
Q67.3	Plagiocephaly
Q67.4	Other congenital deformities of skull, face and jaw
Q67.5	Congenital deformity of spine
Q67.8	Other congenital deformities of chest
Q76.1	Klippel-Feil syndrome
Q76.2	Congenital spondylolisthesis
Q76.3	Congenital scoliosis due to congenital bony malformation
Q76.411	Congenital kyphosis, occipito-atlanto-axial region
Q76.412	Congenital kyphosis, cervical region
Q76.413	Congenital kyphosis, cervicothoracic region
Q76.414	Congenital kyphosis, thoracic region
Q76.415	Congenital kyphosis, thoracolumbar region
Q76.419	Congenital kyphosis, unspecified region
Q76.425	Congenital lordosis, thoracolumbar region
Q76.426	Congenital lordosis, lumbar region
Q76.427	Congenital lordosis, lumbosacral region
Q76.428	Congenital lordosis, sacral and sacrococcygeal region
Q76.429	Congenital lordosis, unspecified region
Q76.49	Other congenital malformations of spine, not associated with scoliosis
Q76.5	Cervical rib
Q77.0	Achondrogenesis
Q77.1	Thanatophoric short stature
Q77.3	Chondrodysplasia punctate
Q77.4	Achondroplasia
Q77.5	Diastrophic dysplasia
Q77.6	Chondroectodermal dysplasia
Q77.7	Spondyloepiphyseal dysplasia
Q77.8	Other osteochondrodysplasia with defects of growth of tubular

<b>ICD-10-CM Code</b>	<b>Code Description</b>
	bones and spine
Q77.9	Osteochondrodysplasia with defects of growth of tubular bones and spine, unspecified

Next, we analyzed the MS-DRG assignments for the related codes listed above and found that cases with the following conditions are assigned to MS-DRGs 551 and 552 (Medical Back Problems with and without MCC, respectively) under MDC 8.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Q76.2	Congenital spondylolisthesis
Q76.411	Congenital kyphosis, occipito-atlanto-axial region
Q76.412	Congenital kyphosis, cervical region
Q76.413	Congenital kyphosis, cervicothoracic region
Q76.414	Congenital kyphosis, thoracic region
Q76.415	Congenital kyphosis, thoracolumbar region
Q76.419	Congenital kyphosis, unspecified region
Q76.49	Other congenital malformations of spine, not associated with scoliosis

The remaining conditions shown below are assigned to MS-DRGs 564, 565, and 566 (Other Musculoskeletal System and Connective Tissue Diagnoses with MCC, with CC, and without CC/MCC, respectively) under MDC 8.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Q67.0	Congenital facial asymmetry
Q67.1	Congenital compression facies
Q67.2	Dolichocephaly
Q67.3	Plagiocephaly
Q67.4	Other congenital deformities of skull, face and jaw
Q67.5	Congenital deformity of spine

<b>ICD-10-CM Code</b>	<b>Code Description</b>
Q67.8	Other congenital deformities of chest
Q76.1	Klippel-Feil syndrome
Q76.3	Congenital scoliosis due to congenital bony malformation
Q76.425	Congenital lordosis, thoracolumbar region
Q76.426	Congenital lordosis, lumbar region
Q76.427	Congenital lordosis, lumbosacral region
Q76.428	Congenital lordosis, sacral and sacrococcygeal region
Q76.429	Congenital lordosis, unspecified region
Q76.5	Cervical rib
Q77.0	Achondrogenesis
Q77.1	Thanatophoric short stature
Q77.3	Chondrodysplasia punctate
Q77.4	Achondroplasia
Q77.5	Diastrophic dysplasia
Q77.6	Chondroectodermal dysplasia
Q77.7	Spondyloepiphyseal dysplasia
Q77.8	Other osteochondrodysplasia with defects of growth of tubular bones and spine
Q77.9	Osteochondrodysplasia with defects of growth of tubular bones and spine, unspecified

As a result of our review, we proposed to reassign ICD-10-CM diagnosis code Q67.6, as well as the additional six ICD-10-CM diagnosis codes above describing congenital musculoskeletal conditions, from MDC 4 to MDC 8 in MS-DRGs 564, 565, and 566. Our clinical advisors agreed with this proposed reassignment because it is clinically appropriate and consistent with the other related ICD-10-CM diagnosis codes grouped in the Q65 through Q79 range that describe congenital malformations and deformities of the musculoskeletal system that are classified under MDC 8 in MS-DRGs 564, 565, and 566. We stated in the proposed rule that by reassigning ICD-10-CM diagnosis code Q67.6

and the additional six ICD-10-CM diagnosis codes listed in the table above from MDC 4 to MDC 8, cases reporting these ICD-10-CM diagnosis codes in combination with the respective ICD-10-PCS procedure code will reflect a more appropriate grouping from a clinical perspective because they will now be classified under a surgical musculoskeletal system related MS-DRG and will no longer result in an MS-DRG assignment to the “unrelated operating room procedures” surgical class.

In summary, we proposed to reassign ICD-10-CM diagnosis codes Q67.6, Q67.7, Q76.6, Q76.7, Q76.8, Q76.9, and Q77.2 from MDC 4 to MDC 8 in MS-DRGs 564, 565, and 566 (Other Musculoskeletal System and Connective Tissue Diagnoses with MCC, with CC, and without CC/MCC, respectively).

Comment: Commenters supported the proposal to reassign the seven ICD-10-CM diagnosis codes describing congenital musculoskeletal conditions from MDC 4 to MDC 8 into MS-DRGs 564, 565 and 566. The commenters stated that the proposal was reasonable, given the ICD-10-CM codes and the information provided.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing the proposal to reassign ICD-10-CM diagnosis codes Q67.6, Q67.7, Q76.6, Q76.7, Q76.8, Q76.9, and Q77.2 from MDC 4 to MDC 8 in MS-DRGs 564, 565, and 566 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

We also received a request recommending that CMS reassign cases for sternal fracture repair procedures from MS-DRGs 981, 982, and 983 and from MS-DRGs 166,

167 and 168 (Other Respiratory System O.R. Procedures with MCC, with CC and without CC/MCC, respectively) under MDC 4 to MS-DRGs 515, 516, and 517 under MDC 8. The requester noted that clavicle fracture repair procedures with an internal fixation device group to MS-DRGs 515, 516, and 517 when reported with an ICD-10-CM diagnosis code describing a fractured clavicle. However, sternal fracture repair procedures with an internal fixation device group to MS-DRGs 981, 982, and 983 or MS-DRGs 166, 167 and 168 when reported with an ICD-10-CM diagnosis code describing a fracture of the sternum. According to the requestor, because the clavicle and sternum are in the same anatomical region of the body, it would appear that assignment to MS-DRGs 515, 516, and 517 would be more appropriate for sternal fracture repair procedures.

The requestor provided the following list of ICD-10-PCS procedure codes in its request for consideration to reassign to MS-DRGs 515, 516 and 517 when reported with an ICD-10-CM diagnosis code for sternal fracture.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PS000Z	Reposition sternum with rigid plate internal fixation device, open approach
0PS004Z	Reposition sternum with internal fixation device, open approach
0PS00ZZ	Reposition sternum, open approach
0PS030Z	Reposition sternum with rigid plate internal fixation device, percutaneous approach
0PS034Z	Reposition sternum with internal fixation device, percutaneous approach

We noted that the above five ICD-10-PCS procedure codes that may be reported to describe a sternal fracture repair are already assigned to MS-DRGs 515,

516, and 517 under MDC 8. In addition, ICD-10-PCS procedure codes 0PS000Z and 0PS030Z are assigned to MS-DRGs 166, 167 and 168 under MDC 4.

As noted in the previous discussion, whenever there is a surgical procedure reported on a claim, which is unrelated to the MDC to which the case was assigned based on the principal diagnosis, it results in an MS-DRG assignment to a surgical class referred to as “unrelated operating room procedures.” In the examples provided by the requestor, when the ICD-10-CM diagnosis code describing a sternal fracture is classified under MDC 4 and the ICD-10-PCS procedure code describing a sternal fracture repair procedure is classified under MDC 8, the GROUPER logic assigns these cases to the “unrelated operating room procedures” group of MS-DRGs (981, 982, and 983) and when the ICD-10-CM diagnosis code describing a sternal fracture is classified under MDC 4 and the ICD-10-PCS procedure code describing a sternal repair procedure is also classified under MDC 4, the GROUPER logic assigns these cases to MS-DRG 166, 167, or 168.

For our review of this grouping issue and the request to have procedures for sternal fracture repairs assigned to MDC 8, we analyzed the ICD-10-CM diagnosis codes describing a sternal fracture currently classified under MDC 4. We identified 10 ICD-10-CM diagnosis codes describing a sternal fracture with an “initial encounter” classified under MDC 4 that are listed in the following table.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
S22.20XA	Unspecified fracture of sternum, initial encounter for closed fracture
S22.20XB	Unspecified fracture of sternum, initial encounter for open fracture
S22.21XA	Fracture of manubrium, initial encounter for closed fracture

<b>ICD-10-CM Code</b>	<b>Code Description</b>
S22.21XB	Fracture of manubrium, initial encounter for open fracture
S22.22XA	Fracture of body of sternum, initial encounter for closed fracture
S22.22XB	Fracture of body of sternum, initial encounter for open fracture
S22.23XA	Sternal manubrial dissociation, initial encounter for closed fracture
S22.23XB	Sternal manubrial dissociation, initial encounter for open fracture
S22.24XA	Fracture of xiphoid process, initial encounter for closed fracture
S22.24XB	Fracture of xiphoid process, initial encounter for open fracture

Our analysis of this grouping issue confirmed that when 1 of the 10 ICD-10-CM diagnosis codes describing a sternal fracture listed in the table above from MDC 4 is reported as a principal diagnosis with an ICD-10-PCS procedure code for a sternal repair procedure from MDC 8, these cases group to MS-DRG 981, 982, or 983. We also confirmed that when 1 of the 10 ICD-10-CM diagnosis codes describing a sternal fracture listed in the table above from MDC 4 is reported as a principal diagnosis with an ICD-10-PCS procedure code for a sternal repair procedure from MDC 4, these cases group to MS-DRG 166, 167 or 168.

Our clinical advisors agreed with the requested reclassification of ICD-10-CM diagnosis codes S22.20XA, S22.20XB, S22.21XA, S22.21XB, S22.22XA, S22.22XB, S22.23XA, S22.23XB, S22.24XA, and S22.24XB describing a sternal fracture with an initial encounter from MDC 4 to MDC 8. They advised that this requested reclassification is clinically appropriate because it is consistent with the other related ICD-10-CM diagnosis codes that describe fractures of the sternum and which are classified under MDC 8. The ICD-10-CM diagnosis codes describing a

sternal fracture currently classified under MDC 8 to MS-DRGs 564, 565, and 566 are listed in the following table.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
S22.20XD	Unspecified fracture of sternum, subsequent encounter for fracture with routine healing
S22.20XG	Unspecified fracture of sternum, subsequent encounter for fracture with delayed healing
S22.20XK	Unspecified fracture of sternum, subsequent encounter for fracture with nonunion
S22.20XS	Unspecified fracture of sternum, sequela
S22.21XD	Fracture of manubrium, subsequent encounter for fracture with routine healing
S22.21XG	Fracture of manubrium, subsequent encounter for fracture with delayed healing
S22.21XK	Fracture of manubrium, subsequent encounter for fracture with nonunion
S22.21XS	Fracture of manubrium, sequela
S22.22XD	Fracture of body of sternum, subsequent encounter for fracture with routine healing
S22.22XG	Fracture of body of sternum, subsequent encounter for fracture with delayed healing
S22.22XK	Fracture of body of sternum, subsequent encounter for fracture with nonunion
S22.22XS	Fracture of body of sternum, sequela
S22.23XD	Sternal manubrial dissociation, subsequent encounter for fracture with routine healing
S22.23XG	Sternal manubrial dissociation, subsequent encounter for fracture with delayed healing
S22.23XK	Sternal manubrial dissociation, subsequent encounter for fracture with nonunion
S22.23XS	Sternal manubrial dissociation, sequela
S22.24XD	Fracture of xiphoid process, subsequent encounter for fracture with routine healing
S22.24XG	Fracture of xiphoid process, subsequent encounter for fracture with delayed healing
S22.24XK	Fracture of xiphoid process, subsequent encounter for fracture with nonunion
S22.24XS	Fracture of xiphoid process, sequela

We stated in the proposed rule that by reclassifying the 10 ICD-10-CM diagnosis codes listed in the table earlier in this section describing sternal fracture codes with an “initial encounter” from MDC 4 to MDC 8, the cases reporting these ICD-10-CM diagnosis codes in combination with the respective ICD-10-PCS procedure codes will reflect a more appropriate grouping from a clinical perspective and will no longer result in an MS-DRG assignment to the “unrelated operating room procedures” surgical class when reported with a surgical procedure classified under MDC 8.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20245), we proposed to reassign ICD-10-CM diagnosis codes S22.20XA, S22.20XB, S22.21XA, S22.21XB, S22.22XA, S22.22XB, S22.23XA, S22.23XB, S22.24XA, and S22.24XB from under MDC 4 to MDC 8 to MS-DRGs 564, 565, and 566. We invited public comments on our proposals.

Comment: Commenters supported the proposal to reassign the 10 ICD-10-CM diagnosis codes describing sternal fractures with an initial encounter from MDC 4 to MDC 8 into MS-DRGs 564, 565 and 566. The commenters stated that the proposal was reasonable, given the ICD-10-CM codes and the information provided.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing the proposal to reassign ICD-10-CM diagnosis codes S22.20XA, S22.20XB, S22.21XA, S22.21XB, S22.22XA, S22.22XB, S22.23XA, S22.23XB, S22.24XA, and S22.24XB

from MDC 4 to MDC 8 to MS-DRGs 564, 565, and 566 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

In addition, we received a request recommending that CMS reassign cases for rib fracture repair procedures from MS-DRGs 981, 982, and 983, and from MS-DRGs 166, 167 and 168 (Other Respiratory System O.R. Procedures with MCC, with CC, and without CC/MCC, respectively) under MDC 4 to MS-DRGs 515, 516, and 517 under MDC 8. The requestor noted that clavicle fracture repair procedures with an internal fixation device group to MS-DRGs 515, 516, and 517 when reported with an ICD-10-CM diagnosis code describing a fractured clavicle. However, rib fracture repair procedures with an internal fixation device group to MS-DRGs 981, 982, and 983 or to MS-DRGs 166, 167 and 168 when reported with an ICD-10-CM diagnosis code describing a rib fracture. According to the requestor, because the clavicle and ribs are in the same anatomical region of the body, it would appear that assignment to MS-DRGs 515, 516, and 517 would be more appropriate for rib fracture repair procedures.

The requestor provided the following list of 10 ICD-10-PCS procedure codes in its request for consideration for reassignment to MS-DRGs 515, 516 and 517 when reported with an ICD-10-CM diagnosis code for rib fracture.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PH104Z	Insertion of internal fixation device into 1 to 2 ribs, open approach
0PH134Z	Insertion of internal fixation device into 1 to 2 ribs, percutaneous approach
0PH144Z	Insertion of internal fixation device into 1 to 2 ribs, percutaneous endoscopic approach
0PH204Z	Insertion of internal fixation device into 3 or more ribs, open approach

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PH234Z	Insertion of internal fixation device into 3 or more ribs, percutaneous approach
0PH244Z	Insertion of internal fixation device into 3 or more ribs, percutaneous endoscopic approach
0PS104Z	Reposition 1 to 2 ribs with internal fixation device, open approach
0PS134Z	Reposition 1 to 2 ribs with internal fixation device, percutaneous approach
0PS204Z	Reposition 3 or more ribs with internal fixation, device, open approach
0PS234Z	Reposition 3 or more ribs with internal fixation device, percutaneous approach

We note that the above 10 ICD-10-PCS procedure codes that may be reported to describe a rib fracture repair are already assigned to MS-DRGs 515, 516, and 517 under MDC 8. In addition, 6 of the 10 ICD-10-PCS procedure codes listed above (0PH104Z, 0PH134Z, 0PH144Z, 0PH204Z, 0PH234Z and 0PH244Z) are also assigned to MS-DRGs 166, 167, and 168 under MDC 4.

As noted in the previous discussions above, whenever there is a surgical procedure reported on a claim, which is unrelated to the MDC to which the case was assigned based on the principal diagnosis, it results in an MS-DRG assignment to a surgical class referred to as “unrelated operating room procedures.” In the examples provided by the requestor, when the ICD-10-CM diagnosis code describing a rib fracture is classified under MDC 4 and the ICD-10-PCS procedure code describing a rib fracture repair procedure is classified under MDC 8, the GROUPER logic assigns these cases to the “unrelated operating room procedures” group of MS-DRGs (981, 982, and 983) and when the ICD-10-CM diagnosis code describing a rib fracture is classified under MDC 4 and the ICD-10-PCS procedure code describing a rib repair

procedure is also classified under MDC 4, the GROUPER logic assigns these cases to MS-DRG 166, 167, or 168.

For our review of this grouping issue and the request to have procedures for rib fracture repairs assigned to MDC 8, we analyzed the ICD-10-CM diagnosis codes describing a rib fracture and found that, while some rib fracture ICD-10-CM diagnosis codes are classified under MDC 8 (which would result in those cases grouping appropriately to MS-DRGs 515, 516, and 517), there are other ICD-10-CM diagnosis codes that are currently classified under MDC 4. We identified the following ICD-10-CM diagnosis codes describing a rib fracture with an initial encounter classified under MDC 4, as listed in the following table.

<b>ICD-10-CM Code</b>	<b>Code Description</b>
S2231XA	Fracture of one rib, right side, initial encounter for closed fracture
S2231XB	Fracture of one rib, right side, initial encounter for open fracture
S2232XA	Fracture of one rib, left side, initial encounter for closed fracture
S2232XB	Fracture of one rib, left side, initial encounter for open fracture
S2239XA	Fracture of one rib, unspecified side, initial encounter for closed fracture
S2239XB	Fracture of one rib, unspecified side, initial encounter for open fracture
S2241XA	Multiple fractures of ribs, right side, initial encounter for closed fracture
S2241XB	Multiple fractures of ribs, right side, initial encounter for open fracture
S2242XA	Multiple fractures of ribs, left side, initial encounter for closed fracture
S2242XB	Multiple fractures of ribs, left side, initial encounter for open fracture
S2243XA	Multiple fractures of ribs, bilateral, initial encounter for closed fracture
S2243XB	Multiple fractures of ribs, bilateral, initial encounter for open fracture
S2249XA	Multiple fractures of ribs, unspecified side, initial encounter for closed fracture

<b>ICD-10-CM Code</b>	<b>Code Description</b>
S2249XB	Multiple fractures of ribs, unspecified side, initial encounter for open fracture
S225XXA	Flail chest, initial encounter for closed fracture
S225XXB	Flail chest, initial encounter for open fracture

Our analysis of this grouping issue confirmed that, when one of the following four ICD-10-PCS procedure codes identified by the requestor (and listed in the table earlier in this section) from MDC 8 (0PS104Z, 0PS134Z, 0PS204Z, or 0PS234Z) is reported to describe a rib fracture repair procedure with a principal diagnosis code for a rib fracture with an initial encounter listed in the table above from MDC 4, these cases group to MS-DRG 981, 982, or 983.

During our review of those four repositioning of the rib procedure codes, we also identified the following four ICD-10-PCS procedure codes classified to MDC 8 that describe repositioning of the ribs.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PS10ZZ	Reposition 1 to 2 ribs, open approach
0PS144Z	Reposition 1 to 2 ribs with internal fixation device, percutaneous endoscopic approach
0PS20ZZ	Reposition 3 or more ribs, open approach
0PS244Z	Reposition 3 or more ribs with internal fixation device, percutaneous endoscopic approach

We confirmed that when one of the above four procedure codes is reported with a principal diagnosis code for a rib fracture listed in the table above from MDC 4, these cases also group to MS-DRG 981, 982, or 983.

Lastly, we confirmed that when one of the six ICD-10-PCS procedure codes describing a rib fracture repair listed in the previous table above from MDC 4 is reported with a principal diagnosis code for a rib fracture with an initial encounter from MDC 4, these cases group to MS-DRG 166, 167, or 168.

In response to the request to reassign the procedure codes that describe a rib fracture repair procedure from MS-DRGs 981, 982, and 983 and from MS-DRGs 166, 167, and 168 under MDC 4 to MS-DRGs 515, 516, and 517 under MDC 8, as discussed above, the 10 ICD-10-PCS procedure codes submitted by the requestor that may be reported to describe a rib fracture repair are already assigned to MS-DRGs 515, 516, and 517 under MDC 8 and 6 of those 10 procedure codes (0PH104Z, 0PH134Z, 0PH144Z, 0PH204Z, 0PH234Z, and 0PH244Z) are also assigned to MS-DRGs 166, 167, and 168 under MDC 4.

We analyzed claims data from the September 2017 update of the FY 2017 MedPAR file for cases reporting a principal diagnosis of a rib fracture (initial encounter) from the list of diagnosis codes shown in the table above with one of the six ICD-10-PCS procedure codes describing the insertion of an internal fixation device into the rib (0PH104Z, 0PH134Z, 0PH144Z, 0PH204Z, 0PH234Z, and 0PH244Z) in MS-DRGs 166, 167, and 168 under MDC 4. Our findings are shown in the table below.

<b>MS-DRGs for Other Respiratory System O.R. Procedures</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 166–All cases	22,938	10.2	\$24,299
MS-DRG 166–Cases with principal diagnosis of rib fracture(s) and insertion of internal fixation device for the rib(s)	40	11.4	\$43,094

<b>MS-DRGs for Other Respiratory System O.R. Procedures</b>			
<b>MS-DRG</b>	<b>Number of Cases</b>	<b>Average Length of Stay</b>	<b>Average Costs</b>
MS-DRG 167–All cases	10,815	5.7	\$13,252
MS-DRG 167–Cases with principal diagnosis of rib fracture(s) and insertion of internal fixation device for the rib(s)	10	6.7	\$30,617
MS-DRG 168–All cases	3,242	3.1	\$9,708
MS-DRG 168–Cases with principal diagnosis of rib fracture(s) and insertion of internal fixation device for the rib(s)	4	2	\$21,501

As shown in this table, there were a total of 22,938 cases in MS-DRG 166, with an average length of stay of 10.2 days and average costs of \$24,299. In MS-DRG 166, we found 40 cases reporting a principal diagnosis of a rib fracture(s) with insertion of an internal fixation device for the rib(s), with an average length of stay of 11.4 days and average costs of \$43,094. There were a total of 10,815 cases in MS-DRG 167, with an average length of stay of 5.7 days and average costs of \$13,252. In MS-DRG 167, we found 10 cases reporting a principal diagnosis of a rib fracture(s) with insertion of an internal fixation device for the rib(s), with an average length of stay of 6.7 days and average costs of \$30,617. There were a total of 3,242 cases in MS-DRG 168, with an average length of stay of 3.1 days and average costs of \$9,708. In MS-DRG 168, we found 4 cases reporting a principal diagnosis of a rib fracture(s) with insertion of an internal fixation device for the rib(s), with an average length of stay of 2 days and average costs of \$21,501. Overall, for MS-DRGs 166, 167, and 168, there were a total of 54 cases reporting a principal diagnosis of a rib fracture(s) with insertion of an internal fixation device for the rib(s), demonstrating that while rib fractures may require

treatment, they are not typically corrected surgically. Our clinical advisors agreed with the current assignment of procedure codes to MS-DRGs 166, 167, and 168 that may be reported to describe repair of a rib fracture under MDC 4, as well as the current assignment of procedure codes to MS-DRGs 515, 516, and 517 that may be reported to describe repair of a rib fracture under MDC 8. Our clinical advisors noted that initial, acute rib fractures can cause numerous respiratory related issues requiring various treatments and problems with the healing of a rib fracture are considered musculoskeletal issues.

We also noted that the procedure codes submitted by the requestor may be reported for other indications and they are not restricted to reporting for repair of a rib fracture. Therefore, assignment of these codes to the MDC 4 MS-DRGs and the MDC 8 MS-DRGs is clinically appropriate.

To address the cases reporting procedure codes describing the repositioning of a rib(s) that are grouping to MS-DRGs 981, 982, and 983 when reported with a principal diagnosis of a rib fracture (initial encounter), in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed to add the following eight ICD-10-PCS procedure codes currently assigned to MDC 8 into MDC 4, in MS-DRGs 166, 167 and 168.

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PS104Z	Reposition 1 to 2 ribs with internal fixation device, open approach
0PS10ZZ	Reposition 1 to 2 ribs, open approach
0PS134Z	Reposition 1 to 2 ribs with internal fixation device, percutaneous approach
0PS144Z	Reposition 1 to 2 ribs with internal fixation device, percutaneous endoscopic approach
0PS204Z	Reposition 3 or more ribs with internal fixation device, open approach
0PS20ZZ	Reposition 3 or more ribs, open approach

<b>ICD-10-PCS Code</b>	<b>Code Description</b>
0PS234Z	Reposition 3 or more ribs with internal fixation device, percutaneous approach
0PS244Z	Reposition 3 or more ribs with internal fixation device, percutaneous endoscopic approach

Our clinical advisors agreed with this proposed addition to the classification structure because it is clinically appropriate and consistent with the other related ICD-10-PCS procedure codes that may be reported to describe rib fracture repair procedures with the insertion of an internal fixation device and are classified under MDC 4.

We stated in the proposed rule that by adding the eight ICD-10-PCS procedure codes describing repositioning of the rib(s) that may be reported to describe a rib fracture repair procedure under the classification structure for MDC 4, these cases will no longer result in an MS-DRG assignment to the “unrelated operating room procedures” surgical class when reported with a diagnosis code under MDC 4.

Comment: Commenters supported the proposal to add the eight ICD-10-PCS procedure codes describing repositioning of the ribs to MDC 4 in MS-DRGs 166, 167 and 168. The commenters stated that the proposal was reasonable, given the data, the ICD-10-PCS codes and the information provided.

Response: We appreciate the commenters’ support.

After consideration of the public comments we received, we are finalizing the proposal to add ICD-10-PCS procedure codes 0PS104Z, 0PS10ZZ, 0PS134Z,

0PS144Z, 0PS204Z, 0PS20ZZ, 0PS234Z and 0PS244Z currently assigned to MDC 8 into MDC 4 in MS-DRGs 166, 167 and 168 under the ICD-10 MS-DRGs Version 36, effective October 1, 2018.

#### 18. Changes to the ICD-10-CM and ICD-10-PCS Coding Systems

In September 1985, the ICD-9-CM Coordination and Maintenance Committee was formed. This is a Federal interdepartmental committee, co-chaired by the National Center for Health Statistics (NCHS), the Centers for Disease Control and Prevention (CDC), and CMS, charged with maintaining and updating the ICD-9-CM system. The final update to ICD-9-CM codes was made on October 1, 2013. Thereafter, the name of the Committee was changed to the ICD-10 Coordination and Maintenance Committee, effective with the March 19-20, 2014 meeting. The ICD-10 Coordination and Maintenance Committee addresses updates to the ICD-10-CM and ICD-10-PCS coding systems. The Committee is jointly responsible for approving coding changes, and developing errata, addenda, and other modifications to the coding systems to reflect newly developed procedures and technologies and newly identified diseases. The Committee is also responsible for promoting the use of Federal and non-Federal educational programs and other communication techniques with a view toward standardizing coding applications and upgrading the quality of the classification system.

The official list of ICD-9-CM diagnosis and procedure codes by fiscal year can be found on the CMS website at:

<http://cms.hhs.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/codes.html>. The

official list of ICD-10-CM and ICD-10-PCS codes can be found on the CMS website at:

<http://www.cms.gov/Medicare/Coding/ICD10/index.html>.

The NCHS has lead responsibility for the ICD-10-CM and ICD-9-CM diagnosis codes included in the Tabular List and Alphabetic Index for Diseases, while CMS has lead responsibility for the ICD-10-PCS and ICD-9-CM procedure codes included in the Tabular List and Alphabetic Index for Procedures.

The Committee encourages participation in the previously mentioned process by health-related organizations. In this regard, the Committee holds public meetings for discussion of educational issues and proposed coding changes. These meetings provide an opportunity for representatives of recognized organizations in the coding field, such as the American Health Information Management Association (AHIMA), the American Hospital Association (AHA), and various physician specialty groups, as well as individual physicians, health information management professionals, and other members of the public, to contribute ideas on coding matters. After considering the opinions expressed at the public meetings and in writing, the Committee formulates recommendations, which then must be approved by the agencies.

The Committee presented proposals for coding changes for implementation in FY 2019 at a public meeting held on September 12-13, 2017, and finalized the coding changes after consideration of comments received at the meetings and in writing by November 13, 2017.

The Committee held its 2018 meeting on March 6-7, 2018. The deadline for submitting comments on these code proposals was scheduled for April 6, 2018. It was

announced at this meeting that any new ICD-10-CM/PCS codes for which there was consensus of public support and for which complete tabular and indexing changes would be made by May 2018 would be included in the October 1, 2018 update to ICD-10-CM/ICD-10-PCS. As discussed in earlier sections of the preamble of this final rule, there are new, revised, and deleted ICD-10-CM diagnosis codes and ICD-10-PCS procedure codes that are captured in Table 6A.—New Diagnosis Codes, Table 6B.—New Procedure Codes, Table 6C.—Invalid Diagnosis Codes, Table 6D.—Invalid Procedure Codes, Table 6E.—Revised Diagnosis Code Titles, and Table 6F.—Revised Procedure Code Titles for this final rule, which are available via the Internet on the CMS website at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. The code titles are adopted as part of the ICD-10 (previously ICD-9-CM) Coordination and Maintenance Committee process. Therefore, although we make the code titles available for the IPPS proposed rule, they are not subject to comment in the proposed rule. Because of the length of these tables, they were not published in the Addendum to the proposed rule. Rather, they are available via the Internet as discussed in section VI. of the Addendum to the proposed rule.

Live Webcast recordings of the discussions of procedure codes at the Committee's September 12-13, 2017 meeting and March 6-7, 2018 meeting can be obtained from the CMS website at: [http://cms.hhs.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/index.html?redirect=/icd9ProviderDiagnosticCodes/03\\_meetings.asp](http://cms.hhs.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/index.html?redirect=/icd9ProviderDiagnosticCodes/03_meetings.asp). The minutes of the discussions of diagnosis codes at the September 12-13, 2017 meeting and March 6-7, 2018 meeting can

be found at: [http://www.cdc.gov/nchs/icd/icd10cm\\_maintenance.html](http://www.cdc.gov/nchs/icd/icd10cm_maintenance.html). These websites also provide detailed information about the Committee, including information on requesting a new code, attending a Committee meeting, and timeline requirements and meeting dates.

We encourage commenters to address suggestions on coding issues involving diagnosis codes to: Donna Pickett, Co-Chairperson, ICD-10 Coordination and Maintenance Committee, NCHS, Room 2402, 3311 Toledo Road, Hyattsville, MD 20782. Comments may be sent by E-mail to: [nchsicd10cm@cdc.gov](mailto:nchsicd10cm@cdc.gov).

Questions and comments concerning the procedure codes should be submitted via E-mail to: [ICDProcedureCodeRequest@cms.hhs.gov](mailto:ICDProcedureCodeRequest@cms.hhs.gov).

In the September 7, 2001 final rule implementing the IPPS new technology add-on payments (66 FR 46906), we indicated we would attempt to include proposals for procedure codes that would describe new technology discussed and approved at the Spring meeting as part of the code revisions effective the following October.

Section 503(a) of Pub. L. 108-173 included a requirement for updating diagnosis and procedure codes twice a year instead of a single update on October 1 of each year. This requirement was included as part of the amendments to the Act relating to recognition of new technology under the IPPS. Section 503(a) amended section 1886(d)(5)(K) of the Act by adding a clause (vii) which states that the Secretary shall provide for the addition of new diagnosis and procedure codes on April 1 of each year, but the addition of such codes shall not require the Secretary to adjust the payment (or diagnosis-related group classification) until the fiscal year that begins after such date.

This requirement improves the recognition of new technologies under the IPPS by providing information on these new technologies at an earlier date. Data will be available 6 months earlier than would be possible with updates occurring only once a year on October 1.

While section 1886(d)(5)(K)(vii) of the Act states that the addition of new diagnosis and procedure codes on April 1 of each year shall not require the Secretary to adjust the payment, or DRG classification, under section 1886(d) of the Act until the fiscal year that begins after such date, we have to update the DRG software and other systems in order to recognize and accept the new codes. We also publicize the code changes and the need for a mid-year systems update by providers to identify the new codes. Hospitals also have to obtain the new code books and encoder updates, and make other system changes in order to identify and report the new codes.

The ICD-10 (previously the ICD-9-CM) Coordination and Maintenance Committee holds its meetings in the spring and fall in order to update the codes and the applicable payment and reporting systems by October 1 of each year. Items are placed on the agenda for the Committee meeting if the request is received at least 2 months prior to the meeting. This requirement allows time for staff to review and research the coding issues and prepare material for discussion at the meeting. It also allows time for the topic to be publicized in meeting announcements in the **Federal Register** as well as on the CMS website. Final decisions on code title revisions are currently made by March 1 so that these titles can be included in the IPPS proposed rule. A complete addendum describing details of all diagnosis and procedure coding changes, both tabular and index,

is published on the CMS and NCHS websites in June of each year. Publishers of coding books and software use this information to modify their products that are used by health care providers. This 5-month time period has proved to be necessary for hospitals and other providers to update their systems.

A discussion of this timeline and the need for changes are included in the December 4-5, 2005 ICD-9-CM Coordination and Maintenance Committee Meeting minutes. The public agreed that there was a need to hold the fall meetings earlier, in September or October, in order to meet the new implementation dates. The public provided comment that additional time would be needed to update hospital systems and obtain new code books and coding software. There was considerable concern expressed about the impact this April update would have on providers.

In the FY 2005 IPPS final rule, we implemented section 1886(d)(5)(K)(vii) of the Act, as added by section 503(a) of Pub. L. 108-173, by developing a mechanism for approving, in time for the April update, diagnosis and procedure code revisions needed to describe new technologies and medical services for purposes of the new technology add-on payment process. We also established the following process for making these determinations. Topics considered during the Fall ICD-10 (previously ICD-9-CM) Coordination and Maintenance Committee meeting are considered for an April 1 update if a strong and convincing case is made by the requester at the Committee's public meeting. The request must identify the reason why a new code is needed in April for purposes of the new technology process. The participants at the meeting and those reviewing the Committee meeting summary report are provided the opportunity to

comment on this expedited request. All other topics are considered for the October 1 update. Participants at the Committee meeting are encouraged to comment on all such requests. There were not any requests approved for an expedited April 1, 2018 implementation of a code at the September 12-13, 2017 Committee meeting. Therefore, there were not any new codes for implementation on April 1, 2018.

ICD-9-CM addendum and code title information is published on the CMS website at:

<http://www.cms.hhs.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/index.html?redirect=/icd9ProviderDiagnosticCodes/01overview.asp#TopofPage>. ICD-10-CM and

ICD-10-PCS addendum and code title information is published on the CMS website at:

<http://www.cms.gov/Medicare/Coding/ICD10/index.html>. CMS also sends copies of all ICD-10-CM and ICD-10-PCS coding changes to its Medicare contractors for use in updating their systems and providing education to providers.

Information on ICD-10-CM diagnosis codes, along with the Official ICD-10-CM Coding Guidelines, can also be found on the CDC website at:

<http://www.cdc.gov/nchs/icd/icd10.htm>. Additionally, information on new, revised, and deleted ICD-10-CM/ICD-10-PCS codes is provided to the AHA for publication in the *Coding Clinic for ICD-10*. AHA also distributes coding update information to publishers and software vendors.

The following chart shows the number of ICD-10-CM and ICD-10-PCS codes and code changes since FY 2016 when ICD-10 was implemented.

<b>Total Number of Codes and Changes in Total Number of Codes per Fiscal Year ICD-10-CM and ICD-10-PCS Codes</b>		
<b>Fiscal Year</b>	<b>Number</b>	<b>Change</b>
<b>FY 2016</b>		
<b>ICD-10-CM</b>	69,823	
<b>ICD-10-PCS</b>	71,974	
<b>FY 2017</b>		
<b>ICD-10-CM</b>	71,486	+1,663
<b>ICD-10-PCS</b>	75,789	+3,815
<b>FY 2018</b>		
<b>ICD-10-CM</b>	71,704	+218
<b>ICD-10-PCS</b>	78,705	+2,916
<b>FY 2019</b>		
<b>ICD-10-CM</b>	71,932	+228
<b>ICD-10-PCS</b>	78,881	+176

As mentioned previously, the public is provided the opportunity to comment on any requests for new diagnosis or procedure codes discussed at the ICD-10 Coordination and Maintenance Committee meeting.

At the September 12-13, 2017 and March 6-7, 2018 Committee meetings, we discussed any requests we had received for new ICD-10-CM diagnosis codes and ICD-10-PCS procedure codes that were to be implemented on October 1, 2018. We invited public comments on any code requests discussed at the September 12-13, 2017 and March 6-7, 2018 Committee meetings for implementation as part of the October 1, 2018 update. The deadline for commenting on code proposals discussed at the September 12-13, 2017 Committee meeting was November 13, 2017. The deadline for

commenting on code proposals discussed at the March 6-7, 2018 Committee meeting was April 6, 2018.

19. Replaced Devices Offered without Cost or with a Credit

a. Background

In the FY 2008 IPPS final rule with comment period (72 FR 47246 through 47251), we discussed the topic of Medicare payment for devices that are replaced without cost or where credit for a replaced device is furnished to the hospital. We implemented a policy to reduce a hospital’s IPPS payment for certain MS-DRGs where the implantation of a device that subsequently failed or was recalled determined the base MS-DRG assignment. At that time, we specified that we will reduce a hospital’s IPPS payment for those MS-DRGs where the hospital received a credit for a replaced device equal to 50 percent or more of the cost of the device.

In the FY 2012 IPPS/LTCH PPS final rule (76 FR 51556 through 51557), we clarified this policy to state that the policy applies if the hospital received a credit equal to 50 percent or more of the cost of the replacement device and issued instructions to hospitals accordingly.

b. Changes for FY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20250 through 20251), for FY 2019, we did not propose to add any MS-DRGs to the policy for replaced devices offered without cost or with a credit. We proposed to continue to include the existing MS-DRGs currently subject to the policy as displayed in the table below.

<b>MDC</b>	<b>MS-DRG</b>	<b>MS-DRG Title</b>
Pre-MDC	001	Heart Transplant or Implant of Heart Assist System with MCC

<b>MDC</b>	<b>MS-DRG</b>	<b>MS-DRG Title</b>
Pre-MDC	002	Heart Transplant or Implant of Heart Assist System without MCC
1	023	Craniotomy with Major Device Implant or Acute Complex CNS Principal Diagnosis with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator
1	024	Craniotomy with Major Device Implant or Acute Complex CNS Principal Diagnosis without MCC
1	025	Craniotomy & Endovascular Intracranial Procedures with MCC
1	026	Craniotomy & Endovascular Intracranial Procedures with CC
1	027	Craniotomy & Endovascular Intracranial Procedures without CC/MCC
1	040	Peripheral, Cranial Nerve & Other Nervous System Procedures with MCC
1	041	Peripheral, Cranial Nerve & Other Nervous System Procedures with CC or Peripheral Neurostimulator
1	042	Peripheral, Cranial Nerve & Other Nervous System Procedures without CC/MCC
3	129	Major Head & Neck Procedures with CC/MCC or Major Device
3	130	Major Head & Neck Procedures without CC/MCC
5	215	Other Heart Assist System Implant
5	216	Cardiac Valve & Other Major Cardiothoracic Procedure with Cardiac Catheterization with MCC
5	217	Cardiac Valve & Other Major Cardiothoracic Procedure with Cardiac Catheterization with CC
5	218	Cardiac Valve & Other Major Cardiothoracic Procedure with Cardiac Catheterization without CC/MCC
5	219	Cardiac Valve & Other Major Cardiothoracic Procedure without Cardiac Catheterization with MCC
5	220	Cardiac Valve & Other Major Cardiothoracic Procedure without Cardiac Catheterization with CC
5	221	Cardiac Valve & Other Major Cardiothoracic Procedure without Cardiac Catheterization without CC/MCC
5	222	Cardiac Defibrillator Implant with Cardiac Catheterization with AMI/Heart Failure/Shock with MCC
5	223	Cardiac Defibrillator Implant with Cardiac Catheterization with AMI/Heart Failure/Shock without MCC
5	224	Cardiac Defibrillator Implant with Cardiac Catheterization without AMI/Heart Failure/Shock with MCC
5	225	Cardiac Defibrillator Implant with Cardiac Catheterization without AMI/Heart Failure/Shock without MCC

<b>MDC</b>	<b>MS-DRG</b>	<b>MS-DRG Title</b>
5	226	Cardiac Defibrillator Implant without Cardiac Catheterization with MCC
5	227	Cardiac Defibrillator Implant without Cardiac Catheterization without MCC
5	242	Permanent Cardiac Pacemaker Implant with MCC
5	243	Permanent Cardiac Pacemaker Implant with CC
5	244	Permanent Cardiac Pacemaker Implant without CC/MCC
5	245	AICD Generator Procedures
5	258	Cardiac Pacemaker Device Replacement with MCC
5	259	Cardiac Pacemaker Device Replacement without MCC
5	260	Cardiac Pacemaker Revision Except Device Replacement with MCC
5	261	Cardiac Pacemaker Revision Except Device Replacement with CC
5	262	Cardiac Pacemaker Revision Except Device Replacement without CC/MCC
5	265	AICD Lead Procedures
5	266	Endovascular Cardiac Valve Replacement with MCC
5	267	Endovascular Cardiac Valve Replacement without MCC
5	268	Aortic and Heart Assist Procedures Except Pulsation Balloon with MCC
5	269	Aortic and Heart Assist Procedures Except Pulsation Balloon without MCC
5	270	Other Major Cardiovascular Procedures with MCC
5	271	Other Major Cardiovascular Procedures with CC
5	272	Other Major Cardiovascular Procedures without CC/MCC
8	461	Bilateral or Multiple Major Joint Procedures Of Lower Extremity with MCC
8	462	Bilateral or Multiple Major Joint Procedures of Lower Extremity without MCC
8	466	Revision of Hip or Knee Replacement with MCC
8	467	Revision of Hip or Knee Replacement with CC
8	468	Revision of Hip or Knee Replacement without CC/MCC
8	469	Major Hip and Knee Joint Replacement or Reattachment of Lower Extremity with MCC or Total Ankle Replacement
8	470	Major Hip and Knee Joint Replacement or Reattachment of Lower Extremity without MCC

We did not receive any public comments on our proposal to continue to include the existing MS-DRGs currently subject to the policy and to not add any additional

MS-DRGs. Therefore, we are finalizing the list of MS-DRGs in the table included in the proposed rule and above that will be subject to the replaced devices offered without cost or with a credit policy, effective October 1, 2018.

#### 20. Other Policy Changes: Other Operating Room (O.R.) and Non-O.R. Issues

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20251 through 20257), we addressed requests that we received regarding changing the designation of specific ICD–10–PCS procedure codes from non-O.R. to O.R. procedures, or changing the designation from O.R. procedure to non-O.R. procedure. In cases where we proposed to change the designation of procedure codes from non-O.R. to O.R. procedures, we also proposed one or more MS-DRGs with which these procedures are clinically aligned and to which the procedure code would be assigned. We generally examine the MS-DRG assignment for similar procedures, such as the other approaches for that procedure, to determine the most appropriate MS-DRG assignment for procedures newly designated as O.R. procedures. We invited public comments on these proposed MS-DRG assignments.

We also noted that many MS-DRGs require the presence of any O.R. procedure. As a result, cases with a principal diagnosis associated with a particular MS-DRG would, by default, be grouped to that MS-DRG. Therefore, we do not list these MS-DRGs in our discussion below. Instead, we only discussed MS-DRGs that require explicitly adding the relevant procedure codes to the GROUPER logic in order for those procedure codes to affect the MS-DRG assignment as intended. In addition, cases that contain O.R. procedures will map to MS-DRGs 981, 982, or 983 (Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) or

MS-DRGs 987, 988, or 989 (Non-Extensive O.R. Procedure Unrelated to Principal Diagnosis with MCC, with CC, and without CC/MCC, respectively) when they do not contain a principal diagnosis that corresponds to one of the MDCs to which that procedure is assigned. These procedures need not be assigned to MS-DRGs 981 through 989 in order for this to occur. Therefore, if requestors included some or all of MS-DRGs 981 through 989 in their request or included MS-DRGs that require the presence of any O.R. procedure, we did not specifically address that aspect in summarizing their request or our response to the request in the section below.

(a) Percutaneous and Percutaneous Endoscopic Excision of Brain and Cerebral Ventricle

One requestor identified 22 ICD-10-PCS procedure codes that describe procedures involving transcranial brain and cerebral ventricle excision that the requestor stated would generally require the resources of an operating room. The 22 procedure codes are listed in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
00B03ZX	Excision of brain, percutaneous approach, diagnostic
00B13ZX	Excision of cerebral meninges, percutaneous approach, diagnostic
00B23ZX	Excision of dura mater, percutaneous approach, diagnostic
00B63ZX	Excision of cerebral ventricle, percutaneous approach, diagnostic
00B73ZX	Excision of cerebral hemisphere, percutaneous approach, diagnostic
00B83ZX	Excision of basal ganglia, percutaneous approach, diagnostic
00B93ZX	Excision of thalamus, percutaneous approach, diagnostic
00BA3ZX	Excision of hypothalamus, percutaneous approach, diagnostic
00BB3ZX	Excision of pons, percutaneous approach, diagnostic
00BC3ZX	Excision of cerebellum, percutaneous approach, diagnostic
00BD3ZX	Excision of medulla oblongata, percutaneous approach, diagnostic
00B04ZX	Excision of brain, percutaneous endoscopic approach, diagnostic
00B14ZX	Excision of cerebral meninges, percutaneous endoscopic approach, diagnostic
00B24ZX	Excision of dura mater, percutaneous endoscopic approach, diagnostic
00B64ZX	Excision of cerebral ventricle, percutaneous endoscopic approach, diagnostic
00B74ZX	Excision of cerebral hemisphere, percutaneous endoscopic approach, diagnostic
00B84ZX	Excision of basal ganglia, percutaneous endoscopic approach, diagnostic
00B94ZX	Excision of thalamus, percutaneous endoscopic approach, diagnostic
00BA4ZX	Excision of hypothalamus, percutaneous endoscopic approach, diagnostic
00BB4ZX	Excision of pons, percutaneous endoscopic approach, diagnostic
00BC4ZX	Excision of cerebellum, percutaneous endoscopic approach, diagnostic
00BD4ZX	Excision of medulla oblongata, percutaneous endoscopic approach, diagnostic

The requestor stated that, although percutaneous burr hole biopsies are performed through smaller openings in the skull than open burr hole biopsies, these procedures require drilling or cutting through the skull using sterile technique with anesthesia for

pain control. The requestor also noted that similar procedures involving percutaneous drainage of the subdural space are currently classified as O.R. procedures in Version 35 of the ICD-10 MS-DRGs. However, these 22 ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment. The requestor recommended that the 22 ICD-10-PCS codes be designated as O.R. procedures and assigned to MS-DRGs 25, 26, and 27 (Craniotomy and Endovascular Intracranial Procedures with MCC, with CC, and without CC/MCC, respectively).

In the proposed rule, we stated that we agreed with the requestor that these procedures typically require the resources of an operating room. Therefore, we proposed to add these 22 ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to MS-DRGs 25, 26, and 27 in MDC 1 (Diseases and Disorders of the Nervous System).

Comment: One commenter supported the proposal to change the designation of the 22 procedure codes listed in the table above to O.R. procedures.

Response: We appreciate the commenter's support.

After consideration of the public comment we received, we are finalizing our proposal to change the designation of the 22 ICD-10-PCS procedure codes shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

## b. Open Extirpation of Subcutaneous Tissue and Fascia

One requestor identified 22 ICD-10-PCS procedure codes that describe procedures involving open extirpation of subcutaneous tissue and fascia that the requestor stated would generally require the resources of an operating room. The 22 procedure codes are listed in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0JC00ZZ	Extirpation of matter from scalp subcutaneous tissue and fascia, open approach
0JC10ZZ	Extirpation of matter from face subcutaneous tissue and fascia, open approach
0JC40ZZ	Extirpation of matter from right neck subcutaneous tissue and fascia, open approach
0JC50ZZ	Extirpation of matter from left neck subcutaneous tissue and fascia, open approach
0JC60ZZ	Extirpation of matter from chest subcutaneous tissue and fascia, open approach
0JC70ZZ	Extirpation of matter from back subcutaneous tissue and fascia, open approach
0JC80ZZ	Extirpation of matter from abdomen subcutaneous tissue and fascia, open approach
0JC90ZZ	Extirpation of matter from buttock subcutaneous tissue and fascia, open approach
0JCB0ZZ	Extirpation of matter from perineum subcutaneous tissue and fascia, open approach
0JCC0ZZ	Extirpation of matter from pelvic region subcutaneous tissue and fascia, open approach
0JCD0ZZ	Extirpation of matter from right upper arm subcutaneous tissue and fascia, open approach
0JCF0ZZ	Extirpation of matter from left upper arm subcutaneous tissue and fascia, open approach
0JCG0ZZ	Extirpation of matter from right lower arm subcutaneous tissue and fascia, open approach
0JCH0ZZ	Extirpation of matter from left lower arm subcutaneous tissue and fascia, open approach
0JCJ0ZZ	Extirpation of matter from right hand subcutaneous tissue and fascia, open approach

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0JCK0ZZ	Extirpation of matter from left hand subcutaneous tissue and fascia, open approach
0JCL0ZZ	Extirpation of matter from right upper leg subcutaneous tissue and fascia, open approach
0JCM0ZZ	Extirpation of matter from left upper leg subcutaneous tissue and fascia, open approach
0JCN0ZZ	Extirpation of matter from right lower leg subcutaneous tissue and fascia, open approach
0JCP0ZZ	Extirpation of matter from left lower leg subcutaneous tissue and fascia, open approach
0JCQ0ZZ	Extirpation of matter from right foot subcutaneous tissue and fascia, open approach
0JCR0ZZ	Extirpation of matter from left foot subcutaneous tissue and fascia, open approach

The requestor stated that these procedures involve making an open incision deeper than the skin under general anesthesia, and that irrigation and/or excision of devitalized tissue or cavity are often required and are considered inherent to the procedure. The requestor also stated that open drainage of subcutaneous tissue and fascia, open excisional debridement of subcutaneous tissue and fascia, and open nonexcisional debridement/extraction of subcutaneous tissue and fascia are designated as O.R. procedures, and that these 22 procedures should be designated as O.R. procedures for the same reason. In the ICD-10 MS-DRGs Version 35, these 22 ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment. The requestor recommended that the 22 ICD-10-PCS procedure codes listed in the table be assigned to MS-DRGs 579, 580, and 581 (Other Skin, Subcutaneous Tissue and Breast Procedures with MCC, CC, and without CC/MCC, respectively).

In the proposed rule, we stated that we disagreed with the requestor that these procedures typically require the resources of an operating room. Our clinical advisors indicated that these open extirpation procedures are minor procedures that can be performed outside of an operating room, such as in a radiology suite with CT or MRI guidance. We disagreed that these procedures are similar to open drainage procedures. Therefore, we proposed to maintain the status of these 22 ICD-10-PCS procedure codes as non-O.R. procedures.

Comment: Some commenters supported the proposal to maintain the designation of the 22 identified procedure codes as non-O.R. procedures. One commenter opposed the proposal, stating that open extirpation procedures typically require the use of anesthesia and an operating room. This commenter stated that the 22 procedures are similar to open drainage, excisional debridement, and non-excisional debridement/extraction of subcutaneous tissue and fascia, which are designated as O.R. procedures.

Response: We appreciate the commenters' support. In response to the commenter who opposed the proposal, our clinical advisors continue to believe that these open extirpation procedures are minor procedures that can be performed outside of an operating room, such as in a radiology suite with CT or MRI guidance, and therefore do not require the use of an operating room. Our clinical advisors further noted that the use of anesthesia frequently occurs in a CT or MRI suite. In addition, our clinical advisors continue to disagree with the assertion that these procedures are similar to open drainage procedures because fewer resources are required for open extirpation procedures relative

to open drainage procedures and the open extirpation procedures are not usually performed in the operating room.

After consideration of the public comments we received, we are finalizing our proposal to maintain the non-O.R. status of the 22 identified open extirpation procedures.

c. Open Scrotum and Breast Procedures

One requestor identified 13 ICD-10-PCS procedure codes that describe procedures involving open drainage, open extirpation, and open debridement/excision of the scrotum and breast. The requestor stated that the 13 procedures listed in the following table involve making an open incision deeper than the skin under general anesthesia, and that irrigation and/or excision of devitalized tissue or cavity are often required and are considered inherent to the procedure. The requestor also stated that open drainage of subcutaneous tissue and fascia, open excisional debridement of subcutaneous tissue and fascia, open non-excisional debridement/extraction of subcutaneous tissue and fascia, and open excision of breast are designated as O.R. procedures, and that these 13 procedures should be designated as O.R. procedures for the same reason. In the ICD-10 MS-DRGs Version 35, these 13 ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0V950ZZ	Drainage of scrotum, open approach
0VB50ZZ	Excision of scrotum, open approach
0VC50ZZ	Extirpation of matter from scrotum, open approach
0H9U0ZZ	Drainage of left breast, open approach
0H9T0ZZ	Drainage of right breast, open approach
0H9V0ZZ	Drainage of bilateral breast, open approach

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0H9W0ZZ	Drainage of right nipple, open approach
0H9X0ZZ	Drainage of left nipple, open approach
0HCT0ZZ	Extirpation of matter from right breast, open approach
0HCU0ZZ	Extirpation of matter from left breast, open approach
0HCV0ZZ	Extirpation of matter from bilateral breast, open approach
0HCW0ZZ	Extirpation of matter from right nipple, open approach
0HCX0ZZ	Extirpation of matter from left nipple, open approach

The requestor recommended that the 3 ICD-10-PCS scrotal procedure codes be assigned to MS-DRGs 717 and 718 (Other Male Reproductive System O.R. Procedures Except Malignancy with CC/MCC and without CC/MCC, respectively) and the 10 breast procedure codes be assigned to MS-DRGs 584 and 585 (Breast Biopsy, Local Excision and Other Breast Procedures with CC/MCC and without CC/MCC, respectively).

In the proposed rule, we stated that we agreed with the requestor that these procedures typically require the resources of an operating room due to the nature of breast and scrotal tissue, as well as with the MS-DRG assignments recommended by the requestor. In addition, we stated that we believe that the scrotal codes should also be assigned to MS-DRGs 715 and 716 (Other Male Reproductive System O.R. Procedures for Malignancy with CC/MCC and without CC/MCC, respectively). Therefore, we proposed to add these 13 ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures, assigned to MS-DRGs 715, 716, 717, and 718 in MDC 12 (Diseases and Disorders of the Male Reproductive System) for

the scrotal procedure codes and assigned to MS-DRGs 584 and 585 in MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue & Breast) for the breast procedure codes.

Comment: Commenters supported the proposal to change the designation of the 13 identified procedure codes to O.R. procedures.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the 13 ICD-10-PCS procedure codes shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

d. Open Parotid Gland and Submaxillary Gland Procedures

One requestor identified eight ICD-10-PCS procedure codes that describe procedures involving open drainage and open extirpation of the parotid or submaxillary glands, shown in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0C980ZZ	Drainage of right parotid gland, open approach
0C990ZZ	Drainage of left parotid gland, open approach
0C9G0ZZ	Drainage of right submaxillary gland, open approach
0C9H0ZZ	Drainage of left submaxillary gland, open approach
0CC80ZZ	Extirpation of matter from right parotid gland, open approach
0CC90ZZ	Extirpation of matter from left parotid gland, open approach
0CCG0ZZ	Extirpation of matter from right submaxillary gland, open approach
0CCH0ZZ	Extirpation of matter from left submaxillary gland, open approach

The requestor stated that these procedures involve making an open incision through subcutaneous tissue, fascia, and potentially muscle, to reach and incise the parotid or submaxillary gland under general anesthesia, and that irrigation and/or excision

of devitalized tissue or cavity may be required and are considered inherent to the procedure. The requestor also stated that open drainage of subcutaneous tissue and fascia, open excisional debridement of subcutaneous tissue and fascia, and open non-excisional debridement/extraction of subcutaneous tissue and fascia are designated as O.R. procedures, and that these eight procedures should be designated as O.R. procedures for the same reason. In the ICD-10 MS-DRGs Version 35, these eight ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment. The requestor requested that these procedures be assigned to MS-DRG 139 (Salivary Gland Procedures).

In the proposed rule, we stated that we agreed with the requestor that these eight procedures typically require the resources of an operating room. Therefore, we proposed to add these ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to MS-DRG 139 in MDC 3 (Diseases and Disorders of the Ear, Nose, Mouth and Throat).

Comment: One commenter supported the proposal to change the designation of the 8 identified procedure codes to O.R. procedures.

Response: We appreciate the commenter's support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the 8 ICD-10-PCS procedure codes shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

e. Removal and Reinsertion of Spacer; Knee Joint and Hip Joint

One requestor identified four sets of ICD-10-PCS procedure code combinations (eight ICD-10-PCS codes) that describe procedures involving open removal and insertion of spacers into the knee or hip joints, shown in the following table. The requestor stated that these are invasive procedures involving removal and reinsertion of devices into major joints and are performed in the operating room under general anesthesia. In the ICD-10 MS-DRGs Version 35, these four ICD-10-PCS procedure code combinations are not recognized as O.R. procedures for purposes of MS-DRG assignment. The requestor recommended that CMS determine the most appropriate surgical DRGs for these procedures.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0SPC08Z	Removal of spacer from right knee joint, open approach
0SHC08Z	Insertion of spacer into right knee joint, open approach
0SPD08Z	Removal of spacer from left knee joint, open approach
0SHD08Z	Insertion of spacer into left knee joint, open approach
0SP908Z	Removal of spacer from right hip joint, open approach
0SH908Z	Insertion of spacer into right hip joint, open approach
0SPB08Z	Removal of spacer from left hip joint, open approach
0SHB08Z	Insertion of spacer into left hip joint, open approach

In the proposed rule, we stated that we agreed with the requestor that these procedures typically require the resources of an operating room. However, our clinical advisors indicated that these codes should be designated as O.R. procedures even when reported as stand-alone procedures. Therefore, for the knee procedures, we proposed to add these four ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version

36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to MS-DRGs 485, 486, and 487 (Knee Procedures with Principal Diagnosis of Infection with MCC, with CC, and without CC/MCC, respectively) or MS-DRGs 488 and 489 (Knee Procedures without Principal diagnosis of Infection with CC/MCC and without CC/MCC, respectively), both in MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue). For the hip procedures, we proposed to add these four ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to MS-DRGs 480, 481, and 482 (Hip and Femur Procedures Except Major Joint with MCC, with CC, and without CC/MCC, respectively) in MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue).

Comment: Commenters supported the proposal to change the designation of the eight identified procedure codes to O.R. procedures. Several commenters who supported the proposal also requested that CMS ensure that changing the designation to O.R. procedures not have the unintended impact of reducing payment for these procedures. These commenters also requested that CMS clarify that the proposed MS-DRG assignments only apply when the eight codes are reported as stand-alone procedures and not, for example, when a spacer is removed and a permanent joint implant is inserted. One commenter stated that additional cost data would be useful in determining whether the payment for the proposed MS-DRGs fully reflect the O.R. resources used in these procedures.

Response: We appreciate the commenters’ support. With regard to the MS-DRG assignment, we are clarifying that, in all cases, the GROUPER logic would consider all of the procedures reported, the principal diagnosis, the surgical hierarchy, and the MS-DRG assignments for those procedures to determine the appropriate MS-DRG assignment. In cases where there is a procedure that is used for MS-DRG assignment that is higher in the surgical hierarchy, that procedure code would determine the MS-DRG assignment. In cases where the other procedure(s) are lower in the surgical hierarchy, the case would be assigned to the MS-DRGs listed above. With regard to the comments about the implications for payment and the cost data, we note that the goals of changing the designation of procedures from non-O.R. to O.R., or vice versa, are to better clinically represent the resources involved in caring for these patients and to enhance the overall accuracy of the system. Therefore, decisions to change an O.R. designation are based on whether such a change would accomplish those goals and not whether the change in designation would impact the payment in a particular direction.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the eight ICD-10-PCS procedure codes shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

f. Endoscopic Dilatation of Ureter(s) with Intraluminal Device

One requestor identified the following three ICD-10-PCS procedure codes that describe procedures involving endoscopic dilatation of ureter(s) with intraluminal device.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0T778DZ	Dilatation of left ureter with intraluminal device, via natural or artificial

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
	opening endoscopic
0T768DZ	Dilation of right ureter with intraluminal device, via natural or artificial opening endoscopic
0T788DZ	Dilation of bilateral ureters with intraluminal device, via natural or artificial opening endoscopic

The requestor stated that these procedures involve the use of cystoureteroscopy to view the bladder and ureter and dilation under visualization, which are often followed by placement of a ureteral stent. The requestor also stated that endoscopic extirpation of matter from ureter, endoscopic biopsy of bladder, endoscopic dilation of bladder, endoscopic dilation of renal pelvis, and endoscopic dilation of the ureter without insertion of intraluminal device are all assigned to surgical DRGs, and that these three procedures should be designated as O.R. procedures for the same reason. In the ICD-10 MS-DRGs Version 35, these three ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment. The requestor recommended that these procedures be assigned to MS-DRGs 656, 657, and 658 (Kidney and Ureter Procedures for Neoplasm with MCC, with CC, and without CC/MCC, respectively) and MS-DRGs 659, 660, and 661 (Kidney and Ureter Procedures for Non-Neoplasm with MCC, with CC, and without CC/MCC, respectively).

In the proposed rule, we stated that we agreed with the requestor that these procedures typically require the resources of an operating room. In addition to the MS-DRGs recommended by the requestor, we further stated that we believe that these procedure codes should also be assigned to other MS-DRGs, consistent with the

assignment of other dilation of ureter procedures: MS-DRG 907, 908, and 909 (Other O.R. Procedures for Injuries with MCC, with CC, and without CC/MCC, respectively) and MS-DRGs 957, 958, and 959 (Other O.R. Procedures for Multiple Significant Trauma with MCC, with CC, and without CC/MCC, respectively). Therefore, we proposed to add the three ICD-10-PCS procedure codes identified by the requestor to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to MS-DRGs 656, 657, and 658 in MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract), MS-DRGs 659, 660, and 661 in MDC 11, MS-DRGs 907, 908, and 909 in MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs), and MS-DRGs 957, 958, and 959 in MDC 24 (Multiple Significant Trauma).

Comment: One commenter supported the proposal to change the designation of the three identified procedure codes to O.R. procedures.

Response: We appreciate the commenter's support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the three ICD-10-PCS procedure codes shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

g. Thoracoscopic Procedures of Pericardium and Pleura

One requestor identified seven ICD-10-PCS procedure codes that describe procedures involving thoracoscopic drainage of the pericardial cavity or pleural cavity, or extirpation of matter from the pleura, as shown in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0W9D4ZZ	Drainage of pericardial cavity, percutaneous endoscopic approach
0W9D40Z	Drainage of pericardial cavity with drainage device, percutaneous endoscopic approach
0W9D4ZX	Drainage of pericardial cavity, percutaneous endoscopic approach, diagnostic
0W994ZX	Drainage of right pleural cavity, percutaneous endoscopic approach, diagnostic
0W9B4ZX	Drainage of left pleural cavity, percutaneous endoscopic approach, diagnostic
0BCP4ZZ	Extirpation of matter from left pleura, percutaneous endoscopic approach
0BCN4ZZ	Extirpation of matter from right pleura, percutaneous endoscopic approach

The requestor stated that these procedures involve making an incision through the chest wall and inserting a thoracoscope for visualization of thoracic structures during the procedure. The requestor also stated that some thoracoscopic procedures are assigned to surgical MS-DRGs, while other procedures are assigned to medical MS-DRGs. In the ICD-10 MS-DRGs Version 35, these seven ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment.

In the proposed rule, we stated that we agreed with the requestor that these procedures typically require the resources of an operating room, as well as significant time and skill. During our review, we noted that the following two related procedures using the open approach also were not currently recognized as O.R. procedures:

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0BCP0ZZ	Extirpation of matter from left pleura, open approach
0BCN0ZZ	Extirpation of matter from right pleura, open approach

Therefore, to be consistent with the MS-DRGs to which other approaches for procedures involving drainage or extirpation of matter from the pleura are assigned, we proposed to add these nine ICD-10-PCS procedure codes to the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures assigned to one of the following MS-DRGs: MS-DRGs 163, 164, and 165 (Major Chest Procedures with MCC, with CC, and without CC/MCC, respectively) in MDC 4 (Diseases and Disorders of the Respiratory System); MS-DRGs 270, 271, and 272 (Other Major Cardiovascular Procedures with MCC, with CC, and without CC/MCC, respectively) in MDC 5 (Diseases and Disorders of the Circulatory System); MS-DRGs 820, 821, and 822 (Lymphoma and Leukemia with Major O.R. Procedure with MCC, with CC, and without CC/MCC, respectively) in MDC 17 (Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms); MS-DRGs 826, 827, and 828 (Myeloproliferative Disorders or Poorly Differentiated Neoplasms with Major O.R. Procedure with MCC, with CC, and without CC/MCC, respectively) in MDC 17; MS-DRGs 907, 908, and 909 (Other O.R. Procedures for Injuries with MCC, with CC, and without CC/MCC, respectively) in MDC 21 (Injuries, Poisonings and Toxic Effects of Drugs); and MS-DRGs 957, 958, and 959 (Other O.R. Procedures for Multiple Significant Trauma with MCC, with CC, and without CC/MCC, respectively) in MDC 24 (Multiple Significant Trauma). We invited public comments on our proposal.

Comment: One commenter supported the proposal to change the designation of the nine identified procedure codes to O.R. procedures.

Response: We appreciate the commenter's support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the nine ICD-10-PCS procedure codes shown in the tables above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

## h. Open Insertion of Totally Implantable and Tunneled Vascular Access Devices

One requestor identified 20 ICD-10-PCS procedure codes that describe procedures involving open insertion of totally implantable and tunneled vascular access devices. The codes are identified in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0JH60WZ	Insertion of totally implantable vascular access device into chest subcutaneous tissue and fascia, open approach
0JH60XZ	Insertion of tunneled vascular access device into chest subcutaneous tissue and fascia, open approach
0JH80WZ	Insertion of totally implantable vascular access device into abdomen subcutaneous tissue and fascia, open approach
0JH80XZ	Insertion of tunneled vascular access device into abdomen subcutaneous tissue and fascia, open approach
0JHD0WZ	Insertion of totally implantable vascular access device into right upper arm subcutaneous tissue and fascia, open approach
0JHD0XZ	Insertion of tunneled vascular access device into right upper arm subcutaneous tissue and fascia, open approach
0JHF0WZ	Insertion of totally implantable vascular access device into left upper arm subcutaneous tissue and fascia, open approach
0JHF0XZ	Insertion of tunneled vascular access device into left upper arm subcutaneous tissue and fascia, open approach
0JHG0WZ	Insertion of totally implantable vascular access device into right lower arm subcutaneous tissue and fascia, open approach
0JHG0XZ	Insertion of tunneled vascular access device into right lower arm subcutaneous tissue and fascia, open approach
0JHH0WZ	Insertion of totally implantable vascular access device into left lower arm subcutaneous tissue and fascia, open approach
0JHH0XZ	Insertion of tunneled vascular access device into left lower arm subcutaneous tissue and fascia, open approach
0JHL0WZ	Insertion of totally implantable vascular access device into right upper leg subcutaneous tissue and fascia, open approach
0JHL0XZ	Insertion of tunneled vascular access device into right upper leg subcutaneous tissue and fascia, open approach
0JHM0WZ	Insertion of totally implantable vascular access device into left upper leg subcutaneous tissue and fascia, open approach
0JHM0XZ	Insertion of tunneled vascular access device into left upper leg subcutaneous tissue and fascia, open approach

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0JHN0WZ	Insertion of totally implantable vascular access device into right lower leg subcutaneous tissue and fascia, open approach
0JHN0XZ	Insertion of tunneled vascular access device into right lower leg subcutaneous tissue and fascia, open approach
0JHP0WZ	Insertion of totally implantable vascular access device into left lower leg subcutaneous tissue and fascia, open approach
0JHP0XZ	Insertion of tunneled vascular access device into left lower leg subcutaneous tissue and fascia, open approach

The requestor stated that open procedures to insert totally implantable vascular access devices (VAD) involve implantation of a port by open approach, cutting through subcutaneous tissue/fascia, placing the device, and then closing tissues so that none of the device is exposed. The requestor explained that open procedures to insert tunneled VADs involve insertion of the catheter into central vasculature, and then open incision of subcutaneous tissue and fascia through which the device is tunneled. The requestor also indicated that these procedures require two ICD-10-PCS codes: one for the insertion of the VAD or port within the subcutaneous tissue; and one for percutaneous insertion of the central venous catheter that is connected to the device. The requestor further noted that, in MDC 11, cases with these procedure codes are assigned to surgical MS-DRGs and that insertion of infusion pumps by open approach groups to surgical MS-DRGs. The requestor recommended that these procedures be assigned to surgical MS-DRGs in MDC 09 as well. We examined the O.R. designations for this group of procedures and determined that they currently are designated as non-O.R. procedures for MDC 09 and MDC 11.

In the proposed rule, we stated that we agreed with the requestor that procedures involving open insertion of totally implantable VAD procedures typically require the resources of an operating room. However, we stated that we disagreed that the tunneled VAD procedures typically require the resources of an operating room. Therefore, we proposed to update the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index to designate the 10 ICD-10-PCS procedure codes describing the totally implantable VAD procedures as O.R. procedures, which will continue to be assigned to MS-DRGs 579, 580, and 581 (Other Skin, Subcutaneous Tissue and Breast Procedures with MCC, with CC, and without CC/MCC, respectively) in MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast) and MS-DRGs 673, 674, and 675 (Other Kidney and Urinary Tract Procedures, with CC, with MCC, and without CC/MCC, respectively) in MDC 11 (Diseases and Disorders of the Kidney and Urinary Tract). We noted that these procedures already affect MS-DRG assignment to these MS-DRGs. However, we stated that if the procedure is unrelated to the principal diagnosis, it will be assigned to MS-DRGs 981, 982, and 983 instead of a medical MS-DRG.

Comment: Commenters supported the proposal to change the designation of the open insertion of totally implantable VAD procedures to O.R. procedures. One commenter requested that CMS reconsider the GROUPER logic to add totally implantable VADs to additional MDCs, and not just MDCs 9 and 11.

Response: We appreciate the commenters' support. With regard to the GROUPER logic, we will consider whether procedures should be added to additional

MDCs during our annual assessment of the codes that group to the unrelated procedure MS-DRGs, which is discussed later in this section of the preamble of this final rule.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the 10 ICD-10-PCS procedure codes describing open insertion of totally implantable VAD procedures shown in the table above from non-O.R. procedures to O.R. procedures, effective October 1, 2018.

Comment: Some commenters supported the proposal to maintain the non-O.R. assignment of the tunneled VAD procedures listed in the table above, while others opposed this proposal. The commenters who opposed the proposal stated that tunneled VAD procedures involve significantly more resources than non-tunneled catheters because of the significant subcutaneous tunneling required. The commenters also noted that the procedures require the specialized setting of an operating room or interventional radiology suite. The commenters explained the following aspects of the technique that they believe indicate that the procedures should be designated as O.R. procedures: A small incision is typically made and one end of the catheter is advanced into the internal jugular vein, and threaded into the superior/inferior vena cava, or right atrium under fluoroscopic guidance. The other end of the catheter is tunneled beneath the skin and subcutaneous tissue and a small incision is made at the exit site on the chest. A small cuff is sometimes anchored to the skin to stabilize and prevent infection. While the tunneled VADs are typically performed with small incisions, the subcutaneous tunneling is the most complex portion of the procedure. In addition, one commenter listed

additional tunneled VAD codes (performed on other body parts, such as the arms and legs) that should also be considered for a change to the O.R. designation.

Response: Our clinical advisors continue to believe that tunneled VAD procedures do not typically require the use of an operating room. As the commenter stated, these procedures are frequently performed under image guidance, which our clinical advisors believe would typically take place in a radiology suite. Our clinical advisors believe that the list of other VAD procedures cited by the commenter would also typically take place in the radiology suite and, therefore, would not typically require the use of an operating room. Therefore, we are not making a change to the O.R. designation of the codes suggested by the commenter.

After consideration of the public comments we received, we are finalizing our proposals to change the designation of the totally implantable VAD procedures to O.R. procedures and to maintain the non-O.R. designation of the tunneled VAD procedures.

i. Percutaneous Joint Reposition with Internal Fixation Device

One requestor identified 20 ICD-10-PCS procedure codes that describe procedures involving percutaneous joint reposition with internal fixation device, shown in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0SS034Z	Reposition lumbar vertebral joint with internal fixation device, percutaneous approach
0SS334Z	Reposition lumbosacral joint with internal fixation device, percutaneous approach
0SS534Z	Reposition sacrococcygeal joint with internal fixation device, percutaneous approach

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0SS634Z	Reposition coccygeal joint with internal fixation device, percutaneous approach
0SS734Z	Reposition right sacroiliac joint with internal fixation device, percutaneous approach
0SS834Z	Reposition left sacroiliac joint with internal fixation device, percutaneous approach
0SS934Z	Reposition right hip joint with internal fixation device, percutaneous approach
0SSB34Z	Reposition left hip joint with internal fixation device, percutaneous approach
0SSC34Z	Reposition right knee joint with internal fixation device, percutaneous approach
0SSD34Z	Reposition left knee joint with internal fixation device, percutaneous approach
0SSF34Z	Reposition right ankle joint with internal fixation device, percutaneous approach
0SSG34Z	Reposition left ankle joint with internal fixation device, percutaneous approach
0SSH34Z	Reposition right tarsal joint with internal fixation device, percutaneous approach
0SSJ34Z	Reposition left tarsal joint with internal fixation device, percutaneous approach
0SSK34Z	Reposition right tarsometatarsal joint with internal fixation device, percutaneous approach
0SSL34Z	Reposition left tarsometatarsal joint with internal fixation device, percutaneous approach
0SSM34Z	Reposition right metatarsal-phalangeal joint with internal fixation device, percutaneous approach
0SSN34Z	Reposition left metatarsal-phalangeal joint with internal fixation device, percutaneous approach
0SSP34Z	Reposition right toe phalangeal joint with internal fixation device, percutaneous approach
0SSQ34Z	Reposition left toe phalangeal joint with internal fixation device, percutaneous approach

The requestor stated that reposition of the sacrum, femur, tibia, fibula, and other fractures of bone with internal fixation device by percutaneous approach are assigned to

surgical DRGs, and that reposition of sacroiliac, hip, knee, and other joint locations with internal fixation should therefore also be assigned to surgical DRGs. In the ICD-10 MS-DRGs Version 35, these 20 ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment.

In the proposed rule, we stated that we disagreed with the requestor that these procedures typically require the resources of an operating room, as these procedures are not as invasive as the bone reposition procedures referenced by the requestor. Our clinical advisors advised that these procedures are typically performed in a radiology suite. Therefore, we proposed to maintain the status of these 20 ICD-10-PCS procedure codes as non-O.R. procedures.

Comment: Some commenters supported the proposal to maintain the status of the 20 ICD-10-PCS procedure codes that describe procedures involving percutaneous joint reposition with internal fixation device listed in the table above, while one commenter opposed our proposal. The commenter who opposed the proposal stated that these procedures are often done under image guidance, but that they are typically done in the operating room because they require anesthesia. The commenter stated that these procedures involving dislocated joints are even more resource intensive than fracture treatment involving a single bone, which are classified as O.R. procedures.

Response: Our clinical advisors continue to believe that the resources involved in furnishing these procedures are consistent with non-O.R. procedures, given that they are typically done with imaging guidance. Our clinical advisors noted that it is not uncommon for anesthesia to be used in the radiology suite, and that the nature of the

resources used in repositioning displaced joints do not require the use of an operating room.

After consideration of the public comments we received, we are finalizing our proposal to maintain the non-O.R. status of the 20 ICD-10-PCS procedure codes that describe procedures involving percutaneous joint reposition with internal fixation device listed in the table above.

j. Endoscopic Destruction of Intestine

One requestor identified four ICD-10-PCS procedure codes that describe procedures involving endoscopic destruction of the intestine, as shown in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0D5A8ZZ	Destruction of jejunum, via natural or artificial opening endoscopic
0D5B8ZZ	Destruction of ileum, via natural or artificial opening endoscopic
0D5C8ZZ	Destruction of ileocecal valve, via natural or artificial opening endoscopic
0D588ZZ	Destruction of small intestine, via natural or artificial opening endoscopic

The requestor stated that these procedures are rarely performed in the operating room. In the ICD-10 MS-DRGs Version 35, these four ICD-10-PCS procedure codes are currently recognized as O.R. procedures for purposes of MS-DRG assignment.

In the proposed rule, we stated that we agreed with the requestor that these procedures do not typically require the resources of an operating room. Therefore, we proposed to remove these four procedure codes from the FY 2019 ICD-10 MS-DRGs

Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures.

Comment: One commenter supported the proposal to change the designation of the four identified procedure codes to non-O.R. procedures.

Response: We appreciate the commenter’s support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the four ICD-10-PCS procedure codes shown in the table above from O.R. procedures to non-O.R. procedures, effective October 1, 2018.

k. Drainage of Lower Lung Via Natural or Artificial Opening Endoscopic, Diagnostic

One requestor identified the following ICD-10-PCS procedure codes that describe procedures involving endoscopic drainage of the lung via natural or artificial opening for diagnostic purposes.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0B9J8ZX	Drainage of left lower lung lobe, via natural or artificial opening endoscopic, diagnostic
0B9F8ZX	Drainage of right lower lung lobe, via natural or artificial opening endoscopic, diagnostic

The requestor stated that these procedures are rarely performed in the operating room.

In the proposed rule, we stated that we agreed with the requestor that these procedures do not require the resources of an operating room. In addition, while we were reviewing this comment, we identified three additional related codes:

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0B9D8ZX	Drainage of right middle lung lobe, via natural or artificial opening endoscopic, diagnostic
0B9C8ZX	Drainage of right upper lung lobe, via natural or artificial opening endoscopic, diagnostic
0B9G8ZX	Drainage of left upper lung lobe, via natural or artificial opening endoscopic, diagnostic

In the ICD-10 MS-DRGs Version 35, these ICD-10-PCS procedure codes are currently recognized as O.R. procedures for purposes of MS-DRG assignment.

We proposed to remove ICD-10-PCS procedure codes 0B9J8ZX, 0B9F8ZX, 0B9D8ZX, 0B9C8ZX, and 0B9G8ZX from the FY 2019 ICD-10 MS-DRGs Version 36 Definitions Manual in Appendix E--Operating Room Procedures and Procedure Code/MS-DRG Index as O.R. procedures.

Comment: One commenter supported the proposal to change the designation of the five identified procedure codes to non-O.R. procedures.

Response: We appreciate the commenter’s support.

After consideration of the public comments we received, we are finalizing our proposal to change the designation of the five ICD-10-PCS procedure codes shown in the tables above from O.R. procedures to non-O.R. procedures, effective October 1, 2018.

1. Endobronchial Valve Procedures

One commenter responding to the FY 2019 IPPS/LTCH PPS proposed rule identified eight ICD-10-PCS procedure codes that describe endobronchial valve procedures that the commenter believed should be designated as O.R. procedures. The codes are identified in the following table.

<b>ICD-10-PCS Procedure Code</b>	<b>Code Description</b>
0BH38GZ	Insertion of endobronchial valve into right main bronchus, via natural or artificial opening endoscopic
0BH48GZ	Insertion of endobronchial valve into right upper lobe bronchus, via natural or artificial opening endoscopic
0BH58GZ	Insertion of endobronchial valve into right middle lobe bronchus, via natural or artificial opening endoscopic
0BH68GZ	Insertion of endobronchial valve into right lower lobe bronchus, via natural or artificial opening endoscopic
0BH78GZ	Insertion of endobronchial valve into left main bronchus, via natural or artificial opening endoscopic
0BH88GZ	Insertion of endobronchial valve into left upper lobe bronchus, via natural or artificial opening endoscopic
0BH98GZ	Insertion of endobronchial valve into lingula bronchus, via natural or artificial opening endoscopic
0BHB8GZ	Insertion of endobronchial valve into left lower lobe bronchus, via natural or artificial opening endoscopic

The commenter stated that these procedures are most commonly performed in the O.R., given the need for better monitoring and support through the process of identifying and occluding a prolonged air leak using endobronchial valve technology. The commenter also noted that other endobronchial valve procedures have an O.R. designation. In the ICD-10 MS-DRGs Version 35, these eight ICD-10-PCS procedure codes are not recognized as O.R. procedures for purposes of MS-DRG assignment. The commenter requested that these eight codes be assigned to MS-DRG 163 (Major Chest Procedures with MCC) due to similar cost and resource use.

Our clinical advisors disagree with the commenter that the eight identified procedures typically require the use of an operating room. Our clinical advisors believe

that these procedures would typically be performed in an endoscopy suite. Therefore, we are not changing the non-O.R. designation of the eight identified ICD-10-PCS codes listed in the table above.

## 21. Out of Scope Public Comments Received

We received public comments regarding a number of MS-DRG and related issues that were outside the scope of the proposals included in the FY 2019 IPPS/LTCH PPS proposed rule. These comments were as follows:

- One commenter requested that CMS evaluate the MS-DRG assignment for Face Transplant procedures and its designation as an extensive versus nonextensive O.R. procedure.
- One commenter requested that a new ICD-10-CM diagnosis code be created for a Kennedy terminal ulcer.
- One commenter requested that CMS examine the MS-DRG assignment and/or payment of patients who are admitted to the hospital for initiation or titration of certain antiarrhythmic drugs.
- One commenter requested that diagnosis codes in category O9A.2- and O9A.3- for obstetrical patients be considered as a principal diagnosis for MDC 24 (Multiple Significant Trauma).
- One commenter requested that new MS-DRGs be created for endovascular cardiac valve replacements with and without a cardiac catheterization.

- One commenter recommended that CMS analyze claims data for cases reporting renal replacement therapy and issue guidance to facilities on the use of the ICD-10-PCS procedure codes.
- One commenter requested specific MS-DRG assignments for ICD-10-PCS codes that were not yet approved at the time of issuance of the proposed rule.
- One commenter recommended changes to the severity level designation for diagnosis codes that appear in Table 6E.—Revised Diagnosis Code Titles associated with the proposed rule.

Because we consider these public comments to be outside the scope of the proposed rule, we are not addressing them in this final rule. As stated in section II.F.1.b. of the preamble of this final rule, we encourage individuals with comments about MS-DRG classification to submit these comments no later than November 1 of each year so that they can be considered for possible inclusion in the annual proposed rule and, if included, may be subjected to public review and comment. We will consider these public comments for possible proposals in future rulemaking as part of our annual review process.

#### G. Recalibration of the FY 2019 MS-DRG Relative Weights

##### 1. Data Sources for Developing the Relative Weights

In developing the FY 2019 system of weights, we proposed to use two data sources: claims data and cost report data. As in previous years, the claims data source is the MedPAR file. This file is based on fully coded diagnostic and procedure data for all Medicare inpatient hospital bills. The FY 2017 MedPAR data used in this final rule

include discharges occurring on October 1, 2016, through September 30, 2017, based on bills received by CMS through March 31, 2018, from all hospitals subject to the IPPS and short-term, acute care hospitals in Maryland (which at that time were under a waiver from the IPPS). The FY 2017 MedPAR file used in calculating the relative weights includes data for approximately 9,689,743 Medicare discharges from IPPS providers. Discharges for Medicare beneficiaries enrolled in a Medicare Advantage managed care plan are excluded from this analysis. These discharges are excluded when the MedPAR “GHO Paid” indicator field on the claim record is equal to “1” or when the MedPAR DRG payment field, which represents the total payment for the claim, is equal to the MedPAR “Indirect Medical Education (IME)” payment field, indicating that the claim was an “IME only” claim submitted by a teaching hospital on behalf of a beneficiary enrolled in a Medicare Advantage managed care plan. In addition, the March 31, 2018 update of the FY 2017 MedPAR file complies with version 5010 of the X12 HIPAA Transaction and Code Set Standards, and includes a variable called “claim type.” Claim type “60” indicates that the claim was an inpatient claim paid as fee-for-service. Claim types “61,” “62,” “63,” and “64” relate to encounter claims, Medicare Advantage IME claims, and HMO no-pay claims. Therefore, the calculation of the relative weights for FY 2019 also excludes claims with claim type values not equal to “60.” The data exclude CAHs, including hospitals that subsequently became CAHs after the period from which the data were taken. We note that the FY 2019 relative weights are based on the ICD-10-CM diagnoses and ICD-10-PCS procedure codes from the FY 2017 MedPAR

claims data, grouped through the ICD-10 version of the FY 2019 GROUPER (Version 36).

The second data source used in the cost-based relative weighting methodology is the Medicare cost report data files from the HCRIS. Normally, we use the HCRIS dataset that is 3 years prior to the IPPS fiscal year. Specifically, we used cost report data from the March 31, 2018 update of the FY 2016 HCRIS for calculating the final FY 2019 cost-based relative weights.

## 2. Methodology for Calculation of the Relative Weights

As we explain in section II.E.2. of the preamble of this final rule, we calculated the FY 2019 relative weights based on 19 CCRs, as we did for FY 2018. The methodology we used to calculate the FY 2019 MS-DRG cost-based relative weights based on claims data in the FY 2017 MedPAR file and data from the FY 2016 Medicare cost reports is as follows:

- To the extent possible, all the claims were regrouped using the FY 2019 MS-DRG classifications discussed in sections II.B. and II.F. of the preamble of this final rule.
- The transplant cases that were used to establish the relative weights for heart and heart-lung, liver and/or intestinal, and lung transplants (MS-DRGs 001, 002, 005, 006, and 007, respectively) were limited to those Medicare-approved transplant centers that have cases in the FY 2017 MedPAR file. (Medicare coverage for heart, heart-lung, liver and/or intestinal, and lung transplants is limited to those facilities that have received approval from CMS as transplant centers.)

- Organ acquisition costs for kidney, heart, heart-lung, liver, lung, pancreas, and intestinal (or multivisceral organs) transplants continue to be paid on a reasonable cost basis. Because these acquisition costs are paid separately from the prospective payment rate, it is necessary to subtract the acquisition charges from the total charges on each transplant bill that showed acquisition charges before computing the average cost for each MS-DRG and before eliminating statistical outliers.
- Claims with total charges or total lengths of stay less than or equal to zero were deleted. Claims that had an amount in the total charge field that differed by more than \$30.00 from the sum of the routine day charges, intensive care charges, pharmacy charges, implantable devices charges, supplies and equipment charges, therapy services charges, operating room charges, cardiology charges, laboratory charges, radiology charges, other service charges, labor and delivery charges, inhalation therapy charges, emergency room charges, blood and blood products charges, anesthesia charges, cardiac catheterization charges, CT scan charges, and MRI charges were also deleted.
- At least 92.5 percent of the providers in the MedPAR file had charges for 14 of the 19 cost centers. All claims of providers that did not have charges greater than zero for at least 14 of the 19 cost centers were deleted. In other words, a provider must have no more than five blank cost centers. If a provider did not have charges greater than zero in more than five cost centers, the claims for the provider were deleted.
- Statistical outliers were eliminated by removing all cases that were beyond 3.0 standard deviations from the geometric mean of the log distribution of both the total charges per case and the total charges per day for each MS-DRG.

- Effective October 1, 2008, because hospital inpatient claims include a POA indicator field for each diagnosis present on the claim, only for purposes of relative weight-setting, the POA indicator field was reset to “Y” for “Yes” for all claims that otherwise have an “N” (No) or a “U” (documentation insufficient to determine if the condition was present at the time of inpatient admission) in the POA field.

Under current payment policy, the presence of specific HAC codes, as indicated by the POA field values, can generate a lower payment for the claim. Specifically, if the particular condition is present on admission (that is, a “Y” indicator is associated with the diagnosis on the claim), it is not a HAC, and the hospital is paid for the higher severity (and, therefore, the higher weighted MS-DRG). If the particular condition is not present on admission (that is, an “N” indicator is associated with the diagnosis on the claim) and there are no other complicating conditions, the DRG GROUPER assigns the claim to a lower severity (and, therefore, the lower weighted MS-DRG) as a penalty for allowing a Medicare inpatient to contract a HAC. While the POA reporting meets policy goals of encouraging quality care and generates program savings, it presents an issue for the relative weight-setting process. Because cases identified as HACs are likely to be more complex than similar cases that are not identified as HACs, the charges associated with HAC cases are likely to be higher as well. Therefore, if the higher charges of these HAC claims are grouped into lower severity MS-DRGs prior to the relative weight-setting process, the relative weights of these particular MS-DRGs would become artificially inflated, potentially skewing the relative weights. In addition, we want to protect the integrity of the budget neutrality process by ensuring that, in estimating payments, no

increase to the standardized amount occurs as a result of lower overall payments in a previous year that stem from using weights and case-mix that are based on lower severity MS-DRG assignments. If this would occur, the anticipated cost savings from the HAC policy would be lost.

To avoid these problems, we reset the POA indicator field to “Y” only for relative weight-setting purposes for all claims that otherwise have an “N” or a “U” in the POA field. This resetting “forced” the more costly HAC claims into the higher severity MS-DRGs as appropriate, and the relative weights calculated for each MS-DRG more closely reflect the true costs of those cases.

In addition, in the FY 2013 IPPS/LTCH PPS final rule, for FY 2013 and subsequent fiscal years, we finalized a policy to treat hospitals that participate in the Bundled Payments for Care Improvement (BPCI) initiative the same as prior fiscal years for the IPPS payment modeling and ratesetting process without regard to hospitals’ participation within these bundled payment models (77 FR 53341 through 53343). Specifically, because acute care hospitals participating in the BPCI Initiative still receive IPPS payments under section 1886(d) of the Act, we include all applicable data from these subsection (d) hospitals in our IPPS payment modeling and ratesetting calculations as if the hospitals were not participating in those models under the BPCI Initiative. We refer readers to the FY 2013 IPPS/LTCH PPS final rule for a complete discussion on our final policy for the treatment of hospitals participating in the BPCI Initiative in our ratesetting process.

The participation of hospitals in the BPCI initiative is set to conclude on September 30, 2018. The participation of hospitals in the Bundled Payments for Care Improvement (BPCI) Advanced model is set to start on October 1, 2018. The BPCI Advanced model, tested under the authority of section 3021 of the Affordable Care Act (codified at section 1115A of the Act), is comprised of a single payment and risk track, which bundles payments for multiple services beneficiaries receive during a Clinical Episode. Acute care hospitals may participate in BPCI Advanced in one of two capacities: as a model Participant or as a downstream Episode Initiator. Regardless of the capacity in which they participate in the BPCI Advanced model, participating acute care hospitals will continue to receive IPPS payments under section 1886(d) of the Act. Acute care hospitals that are Participants also assume financial and quality performance accountability for Clinical Episodes in the form of a reconciliation payment. For additional information on the BPCI Advanced model, we refer readers to the BPCI Advanced webpage on the CMS Center for Medicare and Medicaid Innovation's website at: <https://innovation.cms.gov/initiatives/bpci-advanced/>. As we stated in the proposed rule, for FY 2019, consistent with how we have treated hospitals that participated in the BPCI Initiative, we believe it is appropriate to include all applicable data from the subsection (d) hospitals participating in the BPCI Advanced model in our IPPS payment modeling and ratesetting calculations because, as noted above and in the proposed rule, these hospitals are still receiving IPPS payments under section 1886(d) of the Act.

The charges for each of the 19 cost groups for each claim were standardized to remove the effects of differences in area wage levels, IME and DSH payments, and for

hospitals located in Alaska and Hawaii, the applicable cost-of-living adjustment.

Because hospital charges include charges for both operating and capital costs, we standardized total charges to remove the effects of differences in geographic adjustment factors, cost-of-living adjustments, and DSH payments under the capital IPPS as well.

Charges were then summed by MS-DRG for each of the 19 cost groups so that each MS-DRG had 19 standardized charge totals. Statistical outliers were then removed.

These charges were then adjusted to cost by applying the national average CCRs developed from the FY 2016 cost report data.

The 19 cost centers that we used in the relative weight calculation are shown in the following table. The table shows the lines on the cost report and the corresponding revenue codes that we used to create the 19 national cost center CCRs. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20259), we stated that if stakeholders have comments about the groupings in this table, we may consider those comments as we finalize our policy. However, we did not receive any comments on the groupings in this table, and therefore, we are finalizing the groupings as proposed.

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
Routine Days	Private Room Charges	011X and 014X	Adults & Pediatrics (General Routine Care)	C_1_C5_30	C_1_C6_30	D3_HOS_C2_30
	Semi-Private Room Charges	012X, 013X and 016X				
	Ward Charges	015X				
Intensive Days	Intensive Care Charges	020X	Intensive Care Unit	C_1_C5_31	C_1_C6_31	D3_HOS_C2_31
	Coronary Care Charges	021X	Coronary Care Unit	C_1_C5_32	C_1_C6_32	D3_HOS_C2_32

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
			Burn Intensive Care Unit	C_1_C5_33	C_1_C6_33	D3_HOS_C2_33
			Surgical Intensive Care Unit	C_1_C5_34	C_1_C6_34	D3_HOS_C2_34
			Other Special Care Unit	C_1_C5_35	C_1_C6_35	D3_HOS_C2_35
Drugs	Pharmacy Charges	025X, 026X and 063X	Intravenous Therapy	C_1_C5_64	C_1_C6_64	D3_HOS_C2_64

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
					C_1_C7_64	
			Drugs Charged To Patient	C_1_C5_73	C_1_C6_73	D3_HOS_C2_73
					C_1_C7_73	
Supplies and Equipment	Medical/Surgical Supply Charges	0270, 0271, 0272, 0273, 0274, 0277, 0279, and 0621, 0622, 0623	Medical Supplies Charged to Patients	C_1_C5_71	C_1_C6_71	D3_HOS_C2_71
					C_1_C7_71	
	Durable Medical Equipment	0290, 0291, 0292 and 0294-0299	DME-Rented	C_1_C5_96	C_1_C6_96	D3_HOS_C2_96

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
	Charges					
					C_1_C7_96	
	Used Durable Medical Charges	0293	DME-Sold	C_1_C5_97	C_1_C6_97	D3_HOS_C2_97
					C_1_C7_97	
Implantable Devices		0275, 0276, 0278, 0624	Implantable Devices Charged to Patients	C_1_C5_72	C_1_C6_72	D3_HOS_C2_72
					C_1_C7_72	
Therapy Services	Physical Therapy	042X	Physical Therapy	C_1_C5_66	C_1_C6_66	D3_HOS_C2_66

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
	Charges					
					C_1_C7_66	
	Occupational Therapy Charges	043X	Occupational Therapy	C_1_C5_67	C_1_C6_67	D3_HOS_C2_67
					C_1_C7_67	
	Speech Pathology Charges	044X and 047X	Speech Pathology	C_1_C5_68	C_1_C6_68	D3_HOS_C2_68
					C_1_C7_68	
Inhalation Therapy	Inhalation Therapy Charges	041X and 046X	Respiratory Therapy	C_1_C5_65	C_1_C6_65	D3_HOS_C2_65

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
					C_1_C7_65	
Operating Room	Operating Room Charges	036X	Operating Room	C_1_C5_50	C_1_C6_50	D3_HOS_C2_50
					C_1_C7_50	
		071X	Recovery Room	C_1_C5_51	C_1_C6_51	D3_HOS_C2_51
					C_1_C7_51	
Labor & Delivery	Operating Room Charges	072X	Delivery Room and Labor Room	C_1_C5_52	C_1_C6_52	D3_HOS_C2_52

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
					C_1_C7_52	
Anesthesia	Anesthesia Charges	037X	Anesthesiology	C_1_C5_53	C_1_C6_53	D3_HOS_C2_53
					C_1_C7_53	
Cardiology	Cardiology Charges	048X and 073X	Electrocardiology	C_1_C5_69	C_1_C6_69	D3_HOS_C2_69
					C_1_C7_69	
Cardiac Catheterization		0481	Cardiac Catheterization	C_1_C5_59	C_1_C6_59	D3_HOS_C2_59

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
					C_1_C7_59	
Laboratory	Laboratory Charges	030X, 031X, and 075X	Laboratory	C_1_C5_60	C_1_C6_60	D3_HOS_C2_60
					C_1_C7_60	
			PBP Clinic Laboratory Services	C_1_C5_61	C_1_C6_61	D3_HOS_C2_61
					C_1_C7_61	
		074X, 086X	Electro-Encephalography	C_1_C5_70	C_1_C6_70	D3_HOS_C2_70
					C_1_C7_70	

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
Radiology	Radiology Charges	032X, 040X	Radiology – Diagnostic	C_1_C5_54	C_1_C6_54	D3_HOS_C2_54
					C_1_C7_54	
		028x, 0331, 0332, 0333, 0335, 0339, 0342	Radiology – Therapeutic	C_1_C5_55	C_1_C6_55	D3_HOS_C2_55
		0343 and 344	Radioisotope	C_1_C5_56	C_1_C6_56	D3_HOS_C2_56
					C_1_C7_56	
Computed Tomography (CT) Scan	CT Scan Charges	035X	Computed Tomography (CT) Scan	C_1_C5_57	C_1_C6_57	D3_HOS_C2_57
					C_1_C7_57	

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
Magnetic Resonance Imaging (MRI)	MRI Charges	061X	Magnetic Resonance Imaging (MRI)	C_1_C5_58	C_1_C6_58  C_1_C7_58	D3_HOS_C2_58
Emergency Room	Emergency Room Charges	045x	Emergency	C_1_C5_91	C_1_C6_91  C_1_C7_91	D3_HOS_C2_91
Blood and Blood Products	Blood Charges	038x	Whole Blood & Packed Red Blood Cells	C_1_C5_62	C_1_C6_62	D3_HOS_C2_62

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
					C_1_C7_62	
	Blood Storage / Processing	039x	Blood Storing, Processing, & Transfusing	C_1_C5_63	C_1_C6_63	D3_HOS_C2_63
					C_1_C7_63	
Other Services	Other Service Charge	0002-0099, 022X, 023X, 024X, 052X, 053X				
		055X-060X, 064X-070X, 076X-078X, 090X-095X and 099X				

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
	Renal Dialysis	0800X	Renal Dialysis	C_1_C5_74	C_1_C6_74	D3_HOS_C2_74
	ESRD Revenue Setting Charges	080X and 082X-088X			C_1_C7_74	
			Home Program Dialysis	C_1_C5_94	C_1_C6_94	D3_HOS_C2_94
					C_1_C7_94	
	Outpatient Service Charges	049X	ASC (Non Distinct Part)	C_1_C5_75	C_1_C6_75	D3_HOS_C2_75
	Lithotripsy Charge	079X			C_1_C7_75	
			Other Ancillary	C_1_C5_76	C_1_C6_76	D3_HOS_C2_76
					C_1_C7_76	

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field	Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
	Clinic Visit Charges	051X	Clinic	C_1_C5_90	C_1_C6_90	D3_HOS_C2_90
					C_1_C7_90	
			Observation beds	C_1_C5_92.01	C_1_C6_92.01	D3_HOS_C2_92.01
					C_1_C7_92.01	
	Professional Fees Charges	096X, 097X, and 098X	Other Outpatient Services	C_1_C5_93	C_1_C6_93	D3_HOS_C2_93
					C_1_C7_93	
	Ambulance Charges	054X	Ambulance	C_1_C5_95	C_1_C6_95	D3_HOS_C2_95
					C_1_C7_95	

Cost Center Group Name (19 total)	MedPAR Charge Field	Revenue Codes contained in MedPAR Charge Field		Cost Report Line Description	Cost from HCRIS (Worksheet C, Part 1, Column 5 and line number) Form CMS-2552-10	Charges from HCRIS (Worksheet C, Part 1, Column 6 & 7 and line number) Form CMS-2552-10	Medicare Charges from HCRIS (Worksheet D-3, Column & line number) Form CMS-2552-10
				Rural Health Clinic	C_1_C5_88	C_1_C6_88	D3_HOS_C2_88
						C_1_C7_88	
				FQHC	C_1_C5_89	C_1_C6_89	D3_HOS_C2_89
						C_1_C7_89	

In the FY 2019 IPPS/LTCH PPS proposed rule, we also invited public comments on our proposals related to recalibration of the proposed FY 2019 relative weights and the changes in the relative weights from FY 2018.

Comment: Several commenters expressed concern about significant reductions in the relative weights for certain MS-DRGs, typically citing reductions of greater than 20 percent from FY 2018. Some commenters specifically addressed the significant reductions to MS-DRG 215. Commenters stated that the proposed payment rate for MS-DRG 215 is less than the cost of the medical devices used in these procedures, and suggested that the reduced payments resulting from the reduction in the relative weight could limit access to the procedures that map to this MS-DRG. Some commenters suggested that CMS maintain the relative weight for MS-DRG 215 at the FY 2018 level until the claims data reflects the changes in coding advice for procedures that map to this MS-DRG. Other commenters suggested a 1-year policy for FY 2019 to ensure that the 2-year decrease in payment rates for any MS-DRG from FY 2017 does not exceed 20 percent. Yet other commenters suggested a phase-in for MS-DRGs with significant reductions to their weights to give hospitals time to modify their operations to adapt to the new rates. Commenters referenced prior rulemaking in which CMS delayed or transitioned changes impacting payment rates to limit the impact on providers.

Response: As we indicated in the FY 2018 IPPS/LTCH final rule (82 FR 38103), we do not believe it is normally appropriate to address relative weight fluctuations that appear to be driven by changes in the underlying data. Nevertheless, after reviewing the

comments received and the data used in our ratesetting calculations, we acknowledge an outlier circumstance where the weight for an MS-DRG is seeing a significant reduction of at least 20 percent for each of the 2 years since CMS began using the ICD-10 data in calculating the relative weights. While we would ordinarily consider this weight change to be appropriately driven by the underlying data, given the comments received and the potential for these declines to be related to the ongoing implementation of ICD-10, we are adopting a temporary one-time measure for FY 2019 for an MS-DRG where the FY 2018 relative weight declined by 20 percent from the FY 2017 relative weight and the FY 2019 relative weight would have declined by 20 percent or more from the FY 2018 relative weight. (We note that no FY 2018 weight declined by more than 20 percent from FY 2017 due to our FY 2018 policy.) Specifically, for an MS-DRG meeting this criterion, the FY 2019 relative weight will be set equal to the FY 2018 final relative weight. We believe this policy is consistent with our general authority to assign and update appropriate weighting factors under sections 1886(d)(4)(B) and (C) of the Act. We also believe that it appropriately addresses the situation in which the reduction to the FY 2019 relative weights may still be potentially related to the implementation of ICD-10. We continue to believe that changes in relative weights that are not of this outlier magnitude over the 2 years since we first incorporated the ICD-10 data in our ratesetting are appropriately being driven by the underlying data and not the implementation of ICD-10. There is a significant approximately 10-percentage point outlier gap between this type of reduction and any other reduction that has occurred over the 2-year period.

### 3. Development of National Average CCRs

We developed the national average CCRs as follows:

Using the FY 2016 cost report data, we removed CAHs, Indian Health Service hospitals, all-inclusive rate hospitals, and cost reports that represented time periods of less than 1 year (365 days). We included hospitals located in Maryland because we include their charges in our claims database. We then created CCRs for each provider for each cost center (see prior table for line items used in the calculations) and removed any CCRs that were greater than 10 or less than 0.01. We normalized the departmental CCRs by dividing the CCR for each department by the total CCR for the hospital for the purpose of trimming the data. We then took the logs of the normalized cost center CCRs and removed any cost center CCRs where the log of the cost center CCR was greater or less than the mean log plus/minus 3 times the standard deviation for the log of that cost center CCR. Once the cost report data were trimmed, we calculated a Medicare-specific CCR. The Medicare-specific CCR was determined by taking the Medicare charges for each line item from Worksheet D-3 and deriving the Medicare-specific costs by applying the hospital-specific departmental CCRs to the Medicare-specific charges for each line item from Worksheet D-3. Once each hospital's Medicare-specific costs were established, we summed the total Medicare-specific costs and divided by the sum of the total Medicare-specific charges to produce national average, charge-weighted CCRs.

Comment: Several commenters noted that the CCRs used in the calculation of the relative weights did not match those calculated using the FY 2016 HCRIS.

Response: We appreciate the commenters bringing this issue to our attention.

The commenters are correct that there was an error in the calculation of the national average CCRs in the FY 2019 proposed rule, in that we inadvertently used the FY 2015 HCRIS data rather than the FY 2016 HCRIS data. The CCRs used in the calculation of the relative weights in this final rule correctly reflect the described methodology and the FY 2016 HCRIS data.

After we multiplied the total charges for each MS-DRG in each of the 19 cost centers by the corresponding national average CCR, we summed the 19 “costs” across each MS-DRG to produce a total standardized cost for the MS-DRG. The average standardized cost for each MS-DRG was then computed as the total standardized cost for the MS-DRG divided by the transfer-adjusted case count for the MS-DRG. We calculated the transfer-adjusted discharges for use in the calculation of the Version 36 MS-DRG relative weights using the statutory expansion of the postacute care transfer policy to include discharges to hospice care by a hospice program discussed in section IV.A.2.b. of the preamble of this final rule. For the purposes of calculating the normalization factor, we used the transfer-adjusted discharges with the expanded postacute care transfer policy for Version 35 as well. (When we calculate the normalization factor, we calculate the transfer-adjusted case count for the prior GROUPER version (in this case Version 35) and multiply by the weights of that GROUPER. We then compare that pool to the transfer-adjusted case count using the new GROUPER version.) The average cost for each MS-DRG was then divided by the national average standardized cost per case to determine the relative weight.

The FY 2019 cost-based relative weights were then normalized by an adjustment factor of 1.761194774 so that the average case weight after recalibration was equal to the average case weight before recalibration. The normalization adjustment is intended to ensure that recalibration by itself neither increases nor decreases total payments under the IPPS, as required by section 1886(d)(4)(C)(iii) of the Act.

The 19 national average CCRs for FY 2019 are as follows:

<b>Group</b>	<b>CCR</b>
Routine Days	0.442
Intensive Days	0.368
Drugs	0.191
Supplies & Equipment	0.299
Implantable Devices	0.309
Therapy Services	0.304
Laboratory	0.113
Operating Room	0.179
Cardiology	0.103
Cardiac Catheterization	0.11
Radiology	0.145
MRIs	0.074
CT Scans	0.035
Emergency Room	0.159
Blood and Blood Products	0.296
Other Services	0.345
Labor & Delivery	0.382
Inhalation Therapy	0.156
Anesthesia	0.078

Since FY 2009, the relative weights have been based on 100 percent cost weights based on our MS-DRG grouping system.

When we recalibrated the DRG weights for previous years, we set a threshold of 10 cases as the minimum number of cases required to compute a reasonable weight. We proposed to use that same case threshold in recalibrating the MS-DRG relative weights

for FY 2019. Using data from the FY 2017 MedPAR file, there were 7 MS-DRGs that contain fewer than 10 cases. For FY 2019, because we do not have sufficient MedPAR data to set accurate and stable cost relative weights for these low-volume MS-DRGs, we proposed to compute relative weights for the low-volume MS-DRGs by adjusting their final FY 2018 relative weights by the percentage change in the average weight of the cases in other MS-DRGs. The crosswalk table is shown:

<b>Low-Volume MS-DRG</b>	<b>MS-DRG Title</b>	<b>Crosswalk to MS-DRG</b>
789	Neonates, Died or Transferred to Another Acute Care Facility	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)
790	Extreme Immaturity or Respiratory Distress Syndrome, Neonate	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)
791	Prematurity with Major Problems	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)
792	Prematurity without Major Problems	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)
793	Full-Term Neonate with Major Problems	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)

<b>Low-Volume MS-DRG</b>	<b>MS-DRG Title</b>	<b>Crosswalk to MS-DRG</b>
794	Neonate with Other Significant Problems	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS DRGs)
795	Normal Newborn	Final FY 2018 relative weight (adjusted by percent change in average weight of the cases in other MS-DRGs)

After consideration of the comments we received, we are finalizing our proposals, with the modification for recalibrating the relative weights for FY 2019 at the same level as the FY 2018 relative weights for MS-DRGs where the FY 2018 relative weight declined by 20 percent from the FY 2017 relative weight and the FY 2019 relative weight would have declined by 20 percent or more from the FY 2018 relative weight.

## H. Add-On Payments for New Services and Technologies for FY 2019

### 1. Background

Sections 1886(d)(5)(K) and (L) of the Act establish a process of identifying and ensuring adequate payment for new medical services and technologies (sometimes collectively referred to in this section as “new technologies”) under the IPPS. Section 1886(d)(5)(K)(vi) of the Act specifies that a medical service or technology will be considered new if it meets criteria established by the Secretary after notice and opportunity for public comment. Section 1886(d)(5)(K)(ii)(I) of the Act specifies that a new medical service or technology may be considered for new technology add-on payment if, based on the estimated costs incurred with respect to discharges involving such service or technology, the DRG prospective payment rate otherwise applicable to such discharges under this subsection is inadequate. We note that, beginning with discharges occurring in FY 2008, CMS transitioned from CMS– DRGs to MS–DRGs. The regulations at 42 CFR 412.87 implement these provisions and specify three criteria for a new medical service or technology to receive the additional payment: (1) The medical service or technology must be new; (2) the medical service or technology must be costly such that the DRG rate otherwise applicable to discharges involving the medical service or technology is determined to be inadequate; and (3) the service or technology must demonstrate a substantial clinical improvement over existing services or technologies. Below we highlight some of the major statutory and regulatory provisions relevant to the new technology add-on payment criteria, as well as other information. For

a complete discussion on the new technology add-on payment criteria, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51572 through 51574).

Under the first criterion, as reflected in § 412.87(b)(2), a specific medical service or technology will be considered “new” for purposes of new medical service or technology add-on payments until such time as Medicare data are available to fully reflect the cost of the technology in the MS–DRG weights through recalibration. We note that we do not consider a service or technology to be new if it is substantially similar to one or more existing technologies. That is, even if a technology receives a new FDA approval or clearance, it may not necessarily be considered “new” for purposes of new technology add-on payments if it is “substantially similar” to a technology that was approved or cleared by FDA and has been on the market for more than 2 to 3 years. In the FY 2010 IPPS/RY 2010 LTCH PPS final rule (74 FR 43813 through 43814), we established criteria for evaluating whether a new technology is substantially similar to an existing technology, specifically: (1) Whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome; (2) whether a product is assigned to the same or a different MS–DRG; and (3) whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population. If a technology meets all three of these criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments. For a detailed discussion of the criteria for substantial similarity, we refer readers to the FY 2006 IPPS final rule

(70 FR 47351 through 47352), and the FY 2010 IPPS/LTCH PPS final rule (74 FR 43813 through 43814).

Under the second criterion, § 412.87(b)(3) further provides that, to be eligible for the add-on payment for new medical services or technologies, the MS–DRG prospective payment rate otherwise applicable to discharges involving the new medical service or technology must be assessed for adequacy. Under the cost criterion, consistent with the formula specified in section 1886(d)(5)(K)(ii)(I) of the Act, to assess the adequacy of payment for a new technology paid under the applicable MS–DRG prospective payment rate, we evaluate whether the charges for cases involving the new technology exceed certain threshold amounts. Table 10 that was released with the FY 2018 IPPS/LTCH PPS final rule contains the final thresholds that we used to evaluate applications for new medical service or technology add-on payments for FY 2019. We refer readers to the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Tables.html> to download and view Table 10.

As previously stated, Table 10 that is released with each proposed and final rule contains the thresholds that we use to evaluate applications for new medical service and technology add-on payments for the fiscal year that follows the fiscal year that is otherwise the subject of the rulemaking. For example, the thresholds in Table 10 released with the FY 2018 IPPS/LTCH PPS final rule are applicable to FY 2019 new technology applications. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20276), we proposed, beginning with the thresholds for FY 2020 and future years, to provide the

thresholds that we previously included in Table 10 as one of our data files posted via the Internet on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>, which is the same URL where the impact data files associated with the rulemaking for the applicable fiscal year are posted. We stated that we believed this proposed change in the presentation of this information, specifically in the data files rather than in a Table 10, will clarify for the public that the listed thresholds will be used for new technology add-on payment applications for the next fiscal year (in this case, for FY 2020) rather than for the fiscal year that is otherwise the subject of the rulemaking (in this case, for FY 2019), while continuing to furnish the same information on the new technology add-on payment thresholds for applications for the next fiscal year as has been provided in previous fiscal years. Accordingly, we would no longer include Table 10 as one of our IPPS tables, but would instead include the thresholds applicable to the next fiscal year (beginning with FY 2020) in the data files associated with the prior fiscal year (in this case, FY 2019).

We did not receive any public comments on this proposal. Therefore, we are finalizing the proposal, without modification, and presenting the MS-DRG threshold amounts (previously included in Table 10 of the annual IPPS/LTCH PPS proposed and final rules) that will be used in evaluating new technology add-on payment applications for FY 2020 in a data file that is available, along with the other data files associated with this FY 2019 IPPS/LTCH PPS final rule, on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.

In the September 7, 2001 final rule that established the new technology add-on payment regulations (66 FR 46917), we discussed the issue of whether the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule at 45 CFR parts 160 and 164 applies to claims information that providers submit with applications for new medical service or technology add-on payments. We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51573) for complete information on this issue.

Under the third criterion, § 412.87(b)(1) of our existing regulations provides that a new technology is an appropriate candidate for an additional payment when it represents an advance that substantially improves, relative to technologies previously available, the diagnosis or treatment of Medicare beneficiaries. For example, a new technology represents a substantial clinical improvement when it reduces mortality, decreases the number of hospitalizations or physician visits, or reduces recovery time compared to the technologies previously available. (We refer readers to the September 7, 2001 final rule for a more detailed discussion of this criterion (66 FR 46902).)

The new medical service or technology add-on payment policy under the IPPS provides additional payments for cases with relatively high costs involving eligible new medical services or technologies, while preserving some of the incentives inherent under an average-based prospective payment system. The payment mechanism is based on the cost to hospitals for the new medical service or technology. Under § 412.88, if the costs of the discharge (determined by applying cost-to-charge ratios (CCRs) as described in § 412.84(h)) exceed the full DRG payment (including payments for IME and DSH, but excluding outlier payments), Medicare will make an add-on payment equal to the lesser

of: (1) 50 percent of the estimated costs of the new technology or medical service (if the estimated costs for the case including the new technology or medical service exceed Medicare's payment); or (2) 50 percent of the difference between the full DRG payment and the hospital's estimated cost for the case. Unless the discharge qualifies for an outlier payment, the additional Medicare payment is limited to the full MS-DRG payment plus 50 percent of the estimated costs of the new technology or medical service.

Section 503(d)(2) of Pub. L. 108-173 provides that there shall be no reduction or adjustment in aggregate payments under the IPPS due to add-on payments for new medical services and technologies. Therefore, in accordance with section 503(d)(2) of Pub. L. 108-173, add-on payments for new medical services or technologies for FY 2005 and later years have not been subjected to budget neutrality.

In the FY 2009 IPPS final rule (73 FR 48561 through 48563), we modified our regulations at § 412.87 to codify our longstanding practice of how CMS evaluates the eligibility criteria for new medical service or technology add-on payment applications. That is, we first determine whether a medical service or technology meets the newness criterion, and only if so, do we then make a determination as to whether the technology meets the cost threshold and represents a substantial clinical improvement over existing medical services or technologies. We amended § 412.87(c) to specify that all applicants for new technology add-on payments must have FDA approval or clearance for their new medical service or technology by July 1 of the year prior to the beginning of the fiscal year that the application is being considered.

The Council on Technology and Innovation (CTI) at CMS oversees the agency's cross-cutting priority on coordinating coverage, coding and payment processes for Medicare with respect to new technologies and procedures, including new drug therapies, as well as promoting the exchange of information on new technologies and medical services between CMS and other entities. The CTI, composed of senior CMS staff and clinicians, was established under section 942(a) of Pub. L. 108–173. The Council is co-chaired by the Director of the Center for Clinical Standards and Quality (CCSQ) and the Director of the Center for Medicare (CM), who is also designated as the CTI's Executive Coordinator.

The specific processes for coverage, coding, and payment are implemented by CM, CCSQ, and the local Medicare Administrative Contractors (MACs) (in the case of local coverage and payment decisions). The CTI supplements, rather than replaces, these processes by working to assure that all of these activities reflect the agency-wide priority to promote high-quality, innovative care. At the same time, the CTI also works to streamline, accelerate, and improve coordination of these processes to ensure that they remain up to date as new issues arise. To achieve its goals, the CTI works to streamline and create a more transparent coding and payment process, improve the quality of medical decisions, and speed patient access to effective new treatments. It is also dedicated to supporting better decisions by patients and doctors in using Medicare-covered services through the promotion of better evidence development, which is critical for improving the quality of care for Medicare beneficiaries.

To improve the understanding of CMS' processes for coverage, coding, and payment and how to access them, the CTI has developed an "Innovator's Guide" to these processes. The intent is to consolidate this information, much of which is already available in a variety of CMS documents and in various places on the CMS website, in a user friendly format. This guide was published in 2010 and is available on the CMS website at:

<https://www.cms.gov/Medicare/Coverage/CouncilonTechInnov/Downloads/Innovators-Guide-Master-7-23-15.pdf>.

As we indicated in the FY 2009 IPPS final rule (73 FR 48554), we invite any product developers or manufacturers of new medical services or technologies to contact the agency early in the process of product development if they have questions or concerns about the evidence that would be needed later in the development process for the agency's coverage decisions for Medicare.

The CTI aims to provide useful information on its activities and initiatives to stakeholders, including Medicare beneficiaries, advocates, medical product manufacturers, providers, and health policy experts. Stakeholders with further questions about Medicare's coverage, coding, and payment processes, or who want further guidance about how they can navigate these processes, can contact the CTI at [CTI@cms.hhs.gov](mailto:CTI@cms.hhs.gov).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20277), we noted that applicants for add-on payments for new medical services or technologies for FY 2020 must submit a formal request, including a full description of the clinical applications of

the medical service or technology and the results of any clinical evaluations demonstrating that the new medical service or technology represents a substantial clinical improvement, along with a significant sample of data to demonstrate that the medical service or technology meets the high-cost threshold. Complete application information, along with final deadlines for submitting a full application, will be posted as it becomes available on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/newtech.html>. To allow interested parties to identify the new medical services or technologies under review before the publication of the proposed rule for FY 2020, the CMS website also will post the tracking forms completed by each applicant. We note that the burden associated with this information collection requirement is the time and effort required to collect and submit the data in the formal request for add-on payments for new medical services and technologies to CMS. The aforementioned burden is subject to the PRA; it is currently approved under OMB control number 0938-1347, which expires on December 31, 2020.

## 2. Public Input Before Publication of a Notice of Proposed Rulemaking on Add-On Payments

Section 1886(d)(5)(K)(viii) of the Act, as amended by section 503(b)(2) of Pub. L. 108-173, provides for a mechanism for public input before publication of a notice of proposed rulemaking regarding whether a medical service or technology represents a substantial clinical improvement or advancement. The process for evaluating new medical service and technology applications requires the Secretary to--

- Provide, before publication of a proposed rule, for public input regarding whether a new service or technology represents an advance in medical technology that substantially improves the diagnosis or treatment of Medicare beneficiaries;
- Make public and periodically update a list of the services and technologies for which applications for add-on payments are pending;
- Accept comments, recommendations, and data from the public regarding whether a service or technology represents a substantial clinical improvement; and
- Provide, before publication of a proposed rule, for a meeting at which organizations representing hospitals, physicians, manufacturers, and any other interested party may present comments, recommendations, and data regarding whether a new medical service or technology represents a substantial clinical improvement to the clinical staff of CMS.

In order to provide an opportunity for public input regarding add-on payments for new medical services and technologies for FY 2019 prior to publication of the FY 2019 IPPS/LTCH PPS proposed rule, we published a notice in the **Federal Register** on December 4, 2017 (82 FR 57275), and held a town hall meeting at the CMS Headquarters Office in Baltimore, MD, on February 13, 2018. In the announcement notice for the meeting, we stated that the opinions and presentations provided during the meeting would assist us in our evaluations of applications by allowing public discussion of the substantial clinical improvement criterion for each of the FY 2019 new medical service and technology add-on payment applications before the publication of the FY 2019 IPPS/LTCH PPS proposed rule.

As stated in the proposed rule, approximately 150 individuals registered to attend the town hall meeting in person, while additional individuals listened over an open telephone line. We also live-streamed the town hall meeting and posted the town hall on the CMS YouTube web page at: <https://www.youtube.com/watch?v=9niqfxXe4oA&t=217s>. We considered each applicant's presentation made at the town hall meeting, as well as written comments submitted on the applications that were received by the due date of February 23, 2018, in our evaluation of the new technology add-on payment applications for FY 2019 in the FY 2019 IPPS/LTCH PPS proposed rule.

In response to the published notice and the February 13, 2018 New Technology Town Hall meeting, we received written comments regarding the applications for FY 2019 new technology add-on payments. (We refer readers to the FY 2019 IPPS/LTCH PPS proposed rule for summaries of the comments received in response to the published notice and the New Technology Town Hall meeting and our responses (83 FR 20278 through 20280).) We also noted in the proposed rule that we do not summarize comments that are unrelated to the "substantial clinical improvement" criterion. As explained earlier and in the **Federal Register** notice announcing the New Technology Town Hall meeting (82 FR 57275 through 57277), the purpose of the meeting was specifically to discuss the substantial clinical improvement criterion in regard to pending new technology add-on payment applications for FY 2019. Therefore, we did not summarize those written comments in the proposed rule. In section II.H.5. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, we summarized comments regarding individual applications, or, if applicable, indicated that there were no comments

received in response to the New Technology Town Hall meeting notice, at the end of each discussion of the individual applications.

Public commenters stated opinions and made suggestions relating to the mapping of new technologies to the appropriate MS-DRG, deeming a new technology a substantial clinical improvement if it receives HDE approval from the FDA, and the use of external data in determining the cost threshold that CMS considers to be outside of the scope of the proposed rule. Because we did not request public comments nor propose to make any changes to any of the issues above, we are not summarizing these public comments, nor responding to them in this final rule. As noted below in section II.H.5.a. of the preamble of this final rule, we refer readers to section II.F.2.d. of the preamble of this final rule for a summary of and our responses to the public comments we received in response to our solicitation regarding the most appropriate mechanism to provide payment to hospitals for new technologies, such as CAR T-cell therapy drugs, including through the use of new technology add-on payments (82 FR 20294), as well as a summary of the public comments we received in response to the solicitation for public comment on our concerns with the payment alternatives that we considered for CAR T-cell therapy drugs and therapies and our responses to those comments (83 FR 20190).

### 3. ICD-10-PCS Section “X” Codes for Certain New Medical Services and Technologies

As discussed in the FY 2016 IPPS/LTCH final rule (80 FR 49434), the ICD-10-PCS includes a new section containing the new Section “X” codes, which began being used with discharges occurring on or after October 1, 2015. Decisions regarding changes to ICD-10-PCS Section “X” codes will be handled in the same manner as the

decisions for all of the other ICD-10-PCS code changes. That is, proposals to create, delete, or revise Section “X” codes under the ICD-10-PCS structure will be referred to the ICD-10 Coordination and Maintenance Committee. In addition, several of the new medical services and technologies that have been, or may be, approved for new technology add-on payments may now, and in the future, be assigned a Section “X” code within the structure of the ICD-10-PCS. We posted ICD-10-PCS Guidelines on the CMS website at: <http://www.cms.gov/Medicare/Coding/ICD10/2016-ICD-10-PCS-and-GEMs.html>, including guidelines for ICD-10-PCS Section “X” codes. We encourage providers to view the material provided on ICD-10-PCS Section “X” codes.

#### 4. FY 2019 Status of Technologies Approved for FY 2018 Add-On Payments

##### a. Defitelio<sup>®</sup> (defibrotide)

Jazz Pharmaceuticals submitted an application for new technology add-on payments for FY 2017 for Defitelio<sup>®</sup> (defibrotide), a treatment for patients diagnosed with hepatic veno-occlusive disease (VOD) with evidence of multiorgan dysfunction. VOD, also known as sinusoidal obstruction syndrome (SOS), is a potentially life-threatening complication of hematopoietic stem cell transplantation (HSCT), with an incidence rate of 8 percent to 15 percent. Diagnoses of VOD range in severity from what has been classically defined as a disease limited to the liver (mild) and reversible, to a severe syndrome associated with multi-organ dysfunction or failure and death. Patients treated with HSCT who develop VOD with multi-organ failure face an immediate risk of death, with a mortality rate of more than 80 percent when only supportive care is used.

The applicant asserted that Defitelio<sup>®</sup> improves the survival rate of patients diagnosed with VOD with multi-organ failure by 23 percent.

Defitelio<sup>®</sup> received Orphan Drug Designation for the treatment of VOD in 2003 and for the prevention of VOD in 2007. It has been available to patients as an investigational drug through an expanded access program since 2006. The applicant's New Drug Application (NDA) for Defitelio<sup>®</sup> received FDA approval on March 30, 2016. The applicant confirmed that Defitelio<sup>®</sup> was not available on the U.S. market as of the FDA NDA approval date of March 30, 2016. According to the applicant, commercial packaging could not be completed until the label for Defitelio<sup>®</sup> was finalized with FDA approval, and that commercial shipments of Defitelio<sup>®</sup> to hospitals and treatment centers began on April 4, 2016. Therefore, we agreed that, based on this information, the newness period for Defitelio<sup>®</sup> begins on April 4, 2016, the date of its first commercial availability.

The applicant received approval to use unique ICD-10-PCS procedure codes to describe the use of Defitelio<sup>®</sup>, with an effective date of October 1, 2016. The approved ICD-10PCS procedure codes are: XW03392 (Introduction of defibrotide sodium anticoagulant into peripheral vein, percutaneous approach); and XW04392 (Introduction of defibrotide sodium anticoagulant into central vein, percutaneous approach).

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for Defitelio<sup>®</sup> and consideration of the public comments we received in response to the FY 2017 IPPS/LTCH PPS proposed rule, we approved Defitelio<sup>®</sup> for new technology add-on payments for FY 2017

(81 FR 56906). With the new technology add-on payment application, the applicant estimated that the average Medicare beneficiary would require a dosage of 25 mg/kg/day for a minimum of 21 days of treatment. The recommended dose is 6.25 mg/kg given as a 2-hour intravenous infusion every 6 hours. Dosing should be based on a patient's baseline body weight, which is assumed to be 70 kg for an average adult patient. All vials contain 200 mg at a cost of \$825 per vial. Therefore, we determined that cases involving the use of the Defitelio<sup>®</sup> technology would incur an average cost per case of \$151,800 ( $70 \text{ kg adult} \times 25 \text{ mg/kg/day} \times 21 \text{ days} = 36,750 \text{ mg per patient}/200 \text{ mg vial} = 184 \text{ vials per patient} \times \$825 \text{ per vial} = \$151,800$ ). Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment amount for a case involving the use of Defitelio<sup>®</sup> is \$75,900.

Our policy is that a medical service or technology may continue to be considered “new” for purposes of new technology add-on payments within 2 or 3 years after the point at which data begin to become available reflecting the inpatient hospital code assigned to the new service or technology. Our practice has been to begin and end new technology add-on payments on the basis of a fiscal year, and we have generally followed a guideline that uses a 6-month window before and after the start of the fiscal year to determine whether to extend the new technology add-on payment for an additional fiscal year. In general, we extend new technology add-on payments for an additional year only

if the 3-year anniversary date of the product's entry onto the U.S. market occurs in the latter half of the fiscal year (70 FR 47362).

With regard to the newness criterion for Defitelio<sup>®</sup>, we considered the beginning of the newness period to commence on the first day Defitelio<sup>®</sup> was commercially available (April 4, 2016). Because the 3-year anniversary date of the entry of the Defitelio<sup>®</sup> onto the U.S. market (April 4, 2019) will occur in the latter half of FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20280 through 20281), we proposed to continue new technology add-on payments for this technology for FY 2019. We proposed that the maximum payment for a case involving Defitelio<sup>®</sup> would remain at \$75,900 for FY 2019. We invited public comments on our proposal to continue new technology add-on payments for Defitelio<sup>®</sup> for FY 2019.

Comment: A few commenters agreed with CMS' proposal to continue new technology add-on payments for Defitelio<sup>®</sup> for FY 2019. In addition, the applicant provided updated cost information that indicated, as of April 4, 2018, the current Wholesale Acquisition Cost (WAC) for Defitelio<sup>®</sup> is \$875.24 per vial, which changes the average cost per case from \$151,800 to \$161,000 (70 kg adult x 25 mg/kg/day x 21 days = 36,750 mg per patient/200 mg vial = 184 vials per patient x \$875 per vial = \$161,000). As such, the applicant requested that CMS revise the maximum new technology add-on payment for Defitelio<sup>®</sup> for FY 2019 to \$80,500, or increase the maximum new technology add-on payment for cases involving the use of Defitelio<sup>®</sup> to 50 percent of the revised WAC of the technology per case.

Response: We appreciate the commenters' support and the updated cost information submitted by the applicant.

After consideration of the public comments we received, we are finalizing our proposal, with modification, to continue new technology add-on payments for Defitelio<sup>®</sup> for FY 2019. Based on the applicant's updated cost information, the maximum new technology add-on payment for a case involving the use of Defitelio<sup>®</sup> is \$80,500 for FY 2019.

b. EDWARDS INTUITY Elite<sup>™</sup> Valve System (INTUITY) and LivaNova Perceval Valve (Perceval)

Two manufacturers, Edwards Lifesciences and LivaNova, submitted applications for new technology add-on payments for FY 2018 for the INTUITY Elite<sup>™</sup> Valve System (INTUITY) and the Perceval Valve (Perceval), respectively. Both of these technologies are prosthetic aortic valves inserted using surgical aortic valve replacement (AVR). The applicant for the INTUITY valve stated that it has a unique design, which utilizes features that were not previously included in conventional aortic valves. The deployment mechanism allows for rapid deployment. The expandable frame can reshape the native valve's orifice, creating a larger and more efficiently shaped effective orifice area. In addition, the expandable skirt allows for structural differentiation upon fixation of the valve requiring 3 permanent, guiding sutures rather than the 12 to 18 permanent sutures used to fasten standard prosthetic aortic valves. The applicant for the Perceval valve described the Perceval valve as including: (a) No permanent sutures; (b) a dedicated delivery system that increases the surgeon's visibility; (c) an enabler of a minimally

invasive approach; (d) a capability to promote complexity reduction and reproducibility of the procedure; and (e) a unique device assembly and delivery system.

Aortic valvular disease is relatively common, primarily manifested by aortic stenosis. Most aortic stenosis is due to calcification of the valve, either on a normal tri-leaflet valve or on a congenitally bicuspid valve. The resistance to outflow of blood is progressive over time, and as the size of the aortic orifice narrows, the heart must generate increasingly elevated pressures to maintain blood flow. Symptoms such as angina, heart failure, and syncope eventually develop, and portend a very serious prognosis. There is no effective medical therapy for aortic stenosis, so the diseased valve must be replaced or, less commonly, repaired.

According to both applicants, the INTUITY valve and the Perceval valve are the first sutureless, rapid deployment aortic valves that can be used for the treatment of patients who are candidates for surgical AVR. Because potential cases representing patients who are eligible for treatment using the INTUITY and the Perceval aortic valve devices would group to the same MS-DRGs, and we believe that these devices are intended to treat the same or similar disease in the same or similar patient population, and are purposed to achieve the same therapeutic outcome using the same or similar mechanism of action, we determined these two devices are substantially similar to each other and that it was appropriate to evaluate both technologies as one application for new technology add-on payments under the IPPS.

With respect to the newness criterion, the INTUITY valve received FDA approval on August 12, 2016, and was commercially available on the U.S. market on

August 19, 2016. The Perceval valve received FDA approval on January 8, 2016, and was commercially available on the U.S. market on February 29, 2016. In accordance with our policy, we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38120) that we believe it is appropriate to use the earliest market availability date submitted as the beginning of the newness period. Accordingly, for both devices, we stated that the beginning of the newness period is February 29, 2016, when the Perceval valve became commercially available. The ICD-10-PCS code approved to identify procedures involving the use of both devices when surgically implanted is ICD-10-PCS code X2RF032 (Replacement of aortic valve using zooplasmic tissue, rapid deployment technique, open approach, new technology group 2).

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for the INTUITY and Perceval valves and consideration of the public comments we received in response to the FY 2018 IPPS/LTCH PPS proposed rule, we approved the INTUITY and Perceval valves for new technology add-on payments for FY 2018 (82 FR 38125). We stated that we believed that the use of a weighted-average of the cost of the standard valves based on the projected number of cases involving each technology to determine the maximum new technology add-on payment was most appropriate. To compute the weighted-cost average, we summed the total number of projected cases for each of the applicants, which equaled 2,429 cases (1,750 plus 679). We then divided the number of projected cases for each of the applicants by the total number of cases, which resulted in the following case-weighted percentages: 72 percent for the INTUITY and 28 percent for the Perceval

valve. We then multiplied the cost per case for the manufacturer specific valve by the case-weighted percentage ( $0.72 * \$12,500 = \$9,005.76$  for INTUITY and  $0.28 * \$11,500 = \$3,214.70$  for the Perceval valve). This resulted in a case-weighted average cost of \$12,220.46 for the valves. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the device or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the INTUITY or Perceval valves is \$6,110.23 for FY 2018.

With regard to the newness criterion for the INTUITY and Perceval valves, we considered the newness period for the INTUITY and Perceval valves to begin February 29, 2016. As discussed previously in this section, in general, we extend new technology add-on payments for an additional year only if the 3-year anniversary date of the product's entry onto the U.S. market occurs in the latter half of the upcoming fiscal year. Because the 3-year anniversary date of the entry of the technology onto the U.S. market (February 29, 2019) will occur in the first half of FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20281), we proposed to discontinue new technology add-on payments for the INTUITY and Perceval valves for FY 2019. We invited public comments on our proposal to discontinue new technology add-on payments for the INTUITY and Perceval valves.

Comment: Some commenters supported CMS' proposal to discontinue new technology add-on payments for the INTUITY and Perceval valves and stated that the consideration of these two applications together demonstrated CMS' commitment to

efficiency and optimization of the new technology add-on payment application process. Most commenters agreed that it is appropriate for the newness period to be based on the earliest anniversary date of the product's entry onto the U.S. market, given that the two technologies were evaluated and approved as one application. Other commenters disagreed with CMS' proposal to discontinue new technology add-on payments for the INTUITY and Perceval valves for reasons including the following: (1) there is no precedent for CMS to determine the 3-year anniversary date of a product's entry onto the U.S. market for two technologies that have been jointly awarded new technology add-on payments with different market availability dates; (2) it is inappropriate to choose the earliest market availability date for this class of technologies because it does not acknowledge the disparate newness periods for the two applicants; and (3) Medicare claims data and MS-DRG payment rates do not adequately reflect the additional costs of these technologies. Instead, some of these commenters suggested that the mid-point of the two commercial market availability dates for the Perceval and INTUITY valves be used as the beginning of the newness period, which would be May 25, 2016. These commenters believed that, by using the May 25, 2016 mid-point commercial market availability date, the newness period would conclude on May 25, 2019, which occurs in the second half of the fiscal year and, therefore, would allow new technology add-on payments for the Perceval and INTUITY valves to continue through FY 2019. Another commenter also disagreed with CMS' proposal to discontinue new technology add-on payments for the Perceval and INTUITY valves because the commenter believed that the commercial market availability date of February 29, 2016, is an inappropriate beginning

for the newness period for the Perceval valve due to the thorough training and education process that was implemented by LivaNova, which impacted the market availability of the Perceval valve prior to April 1, 2016, and noted there were fewer than 30 Medicare patients who received implants involving the use of the Perceval valve prior to April 1, 2016.

Response: We appreciate the commenters' input. With regard to the beginning of the technology's newness period, as discussed in the FY 2005 IPPS final rule (69 FR 49003), the timeframe that a new technology can be eligible to receive new technology add-on payments begins when data begin to become available. Therefore, the precedent the commenter mentions regarding two technologies that have been jointly awarded new technology add-on payments with different commercial market availability dates is not relevant. Section 412.87(b)(2) states that a medical service or technology may be considered "new" within 2 or 3 years after the point at which data begin to become available reflecting the inpatient hospital code assigned to the new service or technology (depending on when a new code is assigned and data on the new service or technology become available for DRG recalibration). Section 412.87(b)(2) also specifies that after CMS has recalibrated the DRGs, based on available data, to reflect the costs of an otherwise new medical service or technology, the medical service or technology will no longer be considered "new" under the criterion of the section. Additionally, as stated above, we have determined that the Perceval and INTUITY valves are substantially similar to each other and, therefore, we used the earliest date when data became available

for the technology to determine the beginning of the newness period. Therefore, the newness period began February 29, 2016.

In addition, we do not believe that case volume is a relevant consideration for making the determination as to whether a product is “new.” Consistent with the statute and our implementing regulations, a technology is no longer considered as “new” once it is more than 2 to 3 years old, irrespective of how frequently the medical service or technology has been used in the Medicare population (70 FR 47349). As such, in this case, because the Perceval and INTUITY valves have been available on the U.S. market for more than 2 to 3 years, we consider the costs to have been included in the MS–DRG relative weights regardless of whether the technologies’ use in the Medicare population has been frequent or infrequent.

Based on all of the reasons stated above, the Perceval and INTUITY valves are no longer considered “new” for purposes of new technology add-on payments for FY 2019. Therefore, after consideration of the public comments we received, we are finalizing our proposal to discontinue new technology add-on payments for the Perceval and INTUITY valves for FY 2019.

c. GORE<sup>®</sup> EXCLUDER<sup>®</sup> Iliac Branch Endoprosthesis (Gore IBE Device)

W. L. Gore and Associates, Inc. submitted an application for new technology add-on payments for the GORE<sup>®</sup> EXCLUDER<sup>®</sup> Iliac Branch Endoprosthesis (GORE IBE device) for FY 2017. The device consists of two components: The Iliac Branch Component (IBC) and the Internal Iliac Component (IIC). The applicant indicated that each endoprosthesis is pre-mounted on a customized delivery and deployment system

allowing for controlled endovascular delivery via bilateral femoral access. According to the applicant, the device is designed to be used in conjunction with the GORE<sup>®</sup> EXCLUDER<sup>®</sup> AAA Endoprosthesis for the treatment of patients requiring repair of common iliac or aortoiliac aneurysms. When deployed, the GORE IBE device excludes the common iliac aneurysm from systemic blood flow, while preserving blood flow in the external and internal iliac arteries.

With regard to the newness criterion, the applicant received FDA pre-market approval of the GORE IBE device on February 29, 2016. The following procedure codes describe the use of this technology: 04VC0EZ (Restriction of right common iliac artery with branched or fenestrated intraluminal device, one or two arteries, open approach); 04VC3EZ (Restriction of right common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach); 04VC4EZ (Restriction of right common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach); 04VD0EZ (Restriction of left common iliac artery with branched or fenestrated intraluminal device, one or two arteries, open approach); 04VD3EZ (Restriction of left common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach); 04VD4EZ (Restriction of left common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous endoscopic approach).

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for the GORE IBE device and consideration of the public comments we received in response to the FY 2017 IPPS/LTCH PPS

proposed rule, we approved the GORE IBE device for new technology add-on payments for FY 2017 (81 FR 56909). With the new technology add-on payment application, the applicant indicated that the total operating cost of the GORE IBE device is \$10,500.

Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the device, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the GORE IBE device is \$5,250.

With regard to the newness criterion for the GORE IBE device, we considered the beginning of the newness period to commence when the GORE IBE device received FDA approval on February 29, 2016. As discussed previously in this section, in general, we extend new technology add-on payments for an additional year only if the 3-year anniversary date of the product's entry onto the U.S. market occurs in the latter half of the upcoming fiscal year. Because the 3-year anniversary date of the entry of the GORE IBE device onto the U.S. market (February 28, 2019) will occur in the first half of FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20282), we proposed to discontinue new technology add-on payments for this technology for FY 2019. We invited public comments on our proposal to discontinue new technology add-on payments for the GORE IBE device.

Comment: The applicant (manufacturer) disagreed with CMS' proposal to discontinue new technology add-on payments for the GORE IBE device, and recommended that CMS continue new technology add-on payments for an additional year until sufficient claims data are available to reflect the cost of the technology. The

applicant indicated that the FDA approval date is the date that the manufacturer may begin commercialization and actual manufacturing and marketing takes several months. As such, the applicant believed that it would be more appropriate to use the date of first sale or the date of the first procedure as the beginning of the newness period because it would more appropriately align with the point at which claims and costs data would begin to become available.

With regard to the GORE IBE device, the applicant noted that there was a deletion of ICD-10-PCS procedure codes in FY 2018 used for the coding of procedures identifying the GORE IBE implant, which created confusion for hospital billing departments that were reporting these codes. As a result, the applicant believed that the GORE IBE implant procedures may have been under-reported and the claims data has not captured the utilization and cost data for these implant procedures. Additionally, the applicant stated that MACs, as a general practice, do not include Category III CPT codes in their internal processes and, specifically, do not include 0254T for the identification of the GORE IBE procedure. The applicant believed that this lack of alignment between the new technology add-on payment policy and the MACs' treatment of Category III CPT codes for the identification of GORE IBE procedures likely contributed to the severe under-reporting of procedures involving the GORE IBE implant. Therefore, the applicant recommended that CMS maintain consistent ICD-10 coding practices, encourage the MACs to include procedures involving devices for which new technology add-on payments are effective in their internal processes, and extend new technology

add-on payments for the GORE IBE technology through FY 2019 to allow assessment of sufficient claims data that reflect the costs of the GORE IBE device.

Response: We appreciate the applicant's input. As stated above, while CMS may consider a documented delay in a technology's availability on the U.S. market in determining when the newness period begins, its policy for determining whether to extend new technology add-on payments for an additional year generally applies regardless of the volume of claims for the technology after the beginning of the newness period. Similar to our discussion earlier and in the FY 2006 IPPS final rule (70 FR 47349), we do not believe that case volume is a relevant consideration for making the determination as to whether a product is considered "new" for purposes of new technology add-on payments. Consistent with the statute and our implementing regulations, a technology is no longer considered "new" once it is more than 2 to 3 years old, and the costs of the procedures are considered to be included in the relative weights irrespective of how frequently the technology has been used in the Medicare population. Additionally, since the technology is on the market coding changes or local coverage determinations typically do not delay the beginning of the newness period. Therefore, in this case, because the GORE IBE device has been available on the U.S. market for more than 2 to 3 years, we consider claims and costs data to be available for DRG recalibration of the relative weights, and the costs of the technology to have been included in the MS-DRG relative weights regardless of whether the technology's use in the Medicare population has been frequent or infrequent.

Based on the reasons stated above, the GORE IBE device is no longer considered “new” for purposes of new technology add-on payments for FY 2019. Therefore, after consideration of the public comments we received, we are finalizing our proposal to discontinue new technology add-on payments for the GORE IBE device for FY 2019.

d. PRAXBIND (idarucizumab)

Boehringer Ingelheim Pharmaceuticals, Inc. submitted an application for new technology add-on payments for FY 2017 for idarucizumab (also known as PRAXBIND), a product developed as an antidote to reverse the effects of PRADAXA (dabigatran), which is also manufactured by Boehringer Ingelheim Pharmaceuticals, Inc.

Dabigatran is an oral direct thrombin inhibitor currently indicated: (1) to reduce the risk of stroke and systemic embolism in patients who have been diagnosed with nonvalvular atrial fibrillation (NVAF); (2) for the treatment of deep venous thrombosis (DVT) and pulmonary embolism (PE) in patients who have been administered a parenteral anticoagulant for 5 to 10 days; (3) to reduce the risk of recurrence of DVT and PE in patients who have been previously treated; and (4) for the prophylaxis of DVT and PE in patients who have undergone hip replacement surgery. Currently, unlike the anticoagulant warfarin, there is no specific way to reverse the anticoagulant effect of dabigatran in the event of a major bleeding episode. Idarucizumab is a humanized fragment antigen binding (Fab) molecule, which specifically binds to dabigatran to deactivate the anticoagulant effect, thereby allowing thrombin to act in blood clot formation. The applicant stated that idarucizumab represents a new pharmacologic

approach to neutralizing the specific anticoagulant effect of dabigatran in emergency situations.

PRAXBIND was approved by the FDA on October 16, 2015. PRAXBIND is indicated for the use in the treatment of patients who have been administered PRADAXA when reversal of the anticoagulant effects of dabigatran is needed for emergency surgery or urgent medical procedures or in life-threatening or uncontrolled bleeding.

The applicant was granted approval to use unique ICD-10-PCS procedure codes that became effective October 1, 2016, to describe the use of this technology. The approved ICD-10-PCS procedure codes are: XW03331 (Introduction of idarucizumab, dabigatran reversal agent into peripheral vein, percutaneous approach, new technology group 1); and XW04331 (Introduction of idarucizumab, dabigatran reversal agent into central vein, percutaneous approach, new technology group 1).

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for idarucizumab and consideration of the public comments we received in response to the FY 2017 IPPS/LTCH PPS proposed rule, we approved idarucizumab for new technology add-on payments for FY 2017 (81 FR 56897). With the new technology add-on payment application, the applicant indicated that the total operating cost of idarucizumab is \$3,500. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving idarucizumab is \$1,750.

With regard to the newness criterion for idarucizumab, we considered the beginning of the newness period to commence when PRAXBIND was approved by the FDA on October 16, 2015. As discussed previously in this section, in general, we extend new technology add-on payments for an additional year only if the 3-year anniversary date of the product's entry onto the U.S. market occurs in the latter half of the upcoming fiscal year. Because the 3-year anniversary date of the entry of PRAXBIND onto the U.S. market will occur in the first half of FY 2019 (October 15, 2018), in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20282), we proposed to discontinue new technology add-on payments for this technology for FY 2019. We invited public comments on our proposal to discontinue new technology add-on payments for idarucizumab.

Comment: A few commenters supported CMS' proposal to discontinue new technology add-on payments for FY 2019 for idarucizumab.

Response: We appreciate the commenters' support. After consideration of the public comments we received, we are finalizing our proposal to discontinue new technology add-on payments for idarucizumab for FY 2019.

e. Stelara<sup>®</sup> (Ustekinumab)

Janssen Biotech submitted an application for new technology add-on payments for the Stelara<sup>®</sup> induction therapy for FY 2018. Stelara<sup>®</sup> received FDA approval as an intravenous (IV) infusion treatment for adult patients with moderately to severe active Crohn's disease (CD) who have failed or were intolerant to treatment using immunomodulators or corticosteroids, but never failed a tumor necrosis factor (TNF)

blocker, or failed or were intolerant to treatment using one or more TNF blockers. The FDA approved Stelara<sup>®</sup> on September 23, 2016. Stelara<sup>®</sup> IV is intended for induction - subcutaneous prefilled syringes are intended for maintenance dosing. Stelara<sup>®</sup> must be administered intravenously by a health care professional in either an inpatient hospital setting or an outpatient hospital setting.

Stelara<sup>®</sup> for IV infusion is packaged in single 130 mg vials. Induction therapy consists of a single IV infusion dose using the following weight-based dosing regimen: patients weighing less than (<) 55 kg are administered 260 mg of Stelara<sup>®</sup> (2 vials); patients weighing more than (>) 55 kg, but less than (<) 85 kg are administered 390 mg of Stelara<sup>®</sup> (3 vials); and patients weighing more than (>) 85 kg are administered 520 mg of Stelara<sup>®</sup> (4 vials). An average dose of Stelara<sup>®</sup> administered through IV infusion is 390 mg (3 vials). Maintenance doses of Stelara<sup>®</sup> are administered at 90 mg, subcutaneously, at 8-week intervals and may occur in the outpatient hospital setting.

CD is an inflammatory bowel disease of unknown etiology, characterized by transmural inflammation of the gastrointestinal (GI) tract. Symptoms of CD may include fatigue, prolonged diarrhea with or without bleeding, abdominal pain, weight loss and fever. CD can affect any part of the GI tract including the mouth, esophagus, stomach, small intestine, and large intestine. Conventional pharmacologic treatments of CD include antibiotics, mesalamines, corticosteroids, immunomodulators, tumor necrosis alpha (TNF $\alpha$ ) inhibitors, and anti-integrin agents. Surgery may be necessary for some patients diagnosed with CD in which conventional therapies have failed.

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for Stelara<sup>®</sup> and consideration of the public comments we received in response to the FY 2018 IPPS/LTCH PPS proposed rule, we approved Stelara<sup>®</sup> for new technology add-on payments for FY 2018 (82 FR 38129). Cases involving Stelara<sup>®</sup> that are eligible for new technology add-on payments are identified by ICD–10–PCS procedure code XW033F3 (Introduction of other New Technology therapeutic substance into peripheral vein, percutaneous approach, new technology group 3). With the new technology add-on payment application, the applicant estimated that the average Medicare beneficiary would require a dosage of 390 mg (3 vials) at a hospital acquisition cost of \$1,600 per vial (for a total of \$4,800). Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology or 50 percent of the costs in excess of the MS–DRG payment for the case. As a result, the maximum new technology add-on payment amount for a case involving the use of Stelara<sup>®</sup> is \$2,400.

With regard to the newness criterion for Stelara<sup>®</sup>, we considered the beginning of the newness period to commence when Stelara<sup>®</sup> received FDA approval as an IV infusion treatment of Crohn’s disease (CD) on September 23, 2016. Because the 3-year anniversary date of the entry of Stelara<sup>®</sup> onto the U.S. market (September 23, 2019) will occur after FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20282 through 20283) we proposed to continue new technology add-on payments for this technology for FY 2019. We proposed that the maximum payment for a case involving

Stelara<sup>®</sup> would remain at \$2,400 for FY 2019. We invited public comments on our proposal to continue new technology add-on payments for Stelara<sup>®</sup> for FY 2019.

Comment: A few commenters supported CMS' proposal to continue new technology add-on payments for Stelara<sup>®</sup> for FY 2019. In addition, the applicant (manufacturer) also agreed with CMS' proposal to continue new technology add-on payments for the Stelara<sup>®</sup> for FY 2019, and noted that because the technology's 3-year anniversary date of the product's entry onto the U.S. market would not occur until September 23, 2019, it is appropriate to continue new technology add-on payments for FY 2019.

Response: We appreciate the commenters' support. After consideration of the public comments we received, we are finalizing our proposal to continue new technology add-on payments for Stelara<sup>®</sup> for FY 2019. The maximum payment for a case involving Stelara<sup>®</sup> will remain at \$2,400 for FY 2019.

f. Vistogard<sup>™</sup> (Uridine Triacetate)

BTG International Inc. submitted an application for new technology add-on payments for the Vistogard<sup>™</sup> for FY 2017. Vistogard<sup>™</sup> was developed as an emergency treatment for fluorouracil or capecitabine overdose regardless of the presence of symptoms and for those who exhibit early-onset, severe, or life-threatening toxicity.

Chemotherapeutic agent 5-fluorouracil (5-FU) is used to treat specific solid tumors. It acts upon deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) in the body, as uracil is a naturally occurring building block for genetic material. Fluorouracil is a fluorinated pyrimidine. As a chemotherapy agent, fluorouracil is absorbed by cells

and causes the cell to metabolize into byproducts that are toxic and used to destroy cancerous cells. According to the applicant, the byproducts fluorodoxyridine monophosphate (F-dUMP) and floxuridine triphosphate (FUTP) are believed to do the following: (1) Reduce DNA synthesis; (2) lead to DNA fragmentation; and (3) disrupt RNA synthesis. Fluorouracil is used to treat a variety of solid tumors such as colorectal, head and neck, breast, and ovarian cancer. With different tumor treatments, different dosages, and different dosing schedules, there is a risk for toxicity in these patients. Patients may suffer from fluorouracil toxicity/death if 5-FU is delivered in slight excess or at faster infusion rates than prescribed. The cause of overdose can happen for a variety of reasons including: pump malfunction, incorrect pump programming or miscalculated doses, and accidental or intentional ingestion.

Vistogard™ is an antidote to fluorouracil toxicity and is a prodrug of uridine. Once the drug is metabolized into uridine, it competes with the toxic byproduct FUTP in binding to RNA, thereby reducing the impact FUTP has on cell death.

With regard to the newness criterion, Vistogard™ received FDA approval on December 11, 2015. However, as discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56910), due to the delay in Vistogard™'s commercial availability, we considered the newness period to begin March 2, 2016, instead of December 11, 2015. The applicant noted that the Vistogard™ is the first FDA-approved antidote used to reverse fluorouracil toxicity. The applicant submitted a request for a unique ICD-10-PCS procedure code and was granted approval for the following procedure code: XW0DX82

(Introduction of Uridine Triacetate into Mouth and Pharynx, External Approach, new technology group 2). The new code became effective on October 1, 2016.

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for Vistogard™ and consideration of the public comments we received in response to the FY 2017 IPPS/LTCH PPS proposed rule, we approved Vistogard™ for new technology add-on payments for FY 2017 (81 FR 56912). With the new technology add-on payment application, the applicant stated that the total operating cost of Vistogard™ is \$75,000. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving Vistogard™ is \$37,500.

With regard to the newness criterion for the Vistogard™, we considered the beginning of the newness period to commence upon the entry of Vistogard™ onto the U.S. market on March 2, 2016. As discussed previously in this section, in general, we extend new technology add-on payments for an additional year only if the 3-year anniversary date of the product's entry onto the U.S. market occurs in the latter half of the upcoming fiscal year. Because the 3-year anniversary date of the entry of the Vistogard™ onto the U.S. market (March 2, 2019) will occur in the first half of FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20283), we proposed to discontinue new technology add-on payments for this technology for FY 2019. We

invited public comments on our proposal to discontinue new technology add-on payments for the Vistogard™.

Comment: A few commenters supported CMS' proposal to discontinue new technology add-on payments for FY 2019 for Vistogard™.

Response: We appreciate the commenters' support. After consideration of the public comments we received, we are finalizing our proposal to discontinue new technology add-on payments for Vistogard™ for FY 2019.

g. ZINPLAVA™ (Bezlotoxumab)

Merck & Co., Inc. submitted an application for new technology add-on payments for ZINPLAVA™ for FY 2018. ZINPLAVA™ is indicated to reduce recurrence of *Clostridium difficile* infection (CDI) in adult patients who are receiving antibacterial drug treatment for a diagnosis of CDI who are at high risk for CDI recurrence. ZINPLAVA™ is not indicated for the treatment of the presenting episode of CDI and is not an antibacterial drug.

*Clostridium difficile* (*C-diff*) is a disease-causing anaerobic, spore forming bacteria that can affect the gastrointestinal (GI) tract. Some people carry the *C-diff* bacterium in their intestines, but never develop symptoms of an infection. The difference between asymptomatic colonization and pathogenicity is caused primarily by the production of an enterotoxin (Toxin A) and/or a cytotoxin (Toxin B). The presence of either or both toxins can lead to symptomatic CDI, which is defined as the acute onset of diarrhea with a documented infection with toxigenic *C-diff*, or the presence of either toxin A or B. The GI tract contains millions of bacteria, commonly referred to as “normal

flora” or “good bacteria,” which play a role in protecting the body from infection. Antibiotics can kill these good bacteria and allow the *C-diff* bacteria to multiply and release toxins that damage the cells lining the intestinal wall, resulting in a CDI. CDI is a leading cause of hospital-associated gastrointestinal illnesses. Persons at increased risk for CDI include people who are treated with current or recent antibiotic use, people who have encountered current or recent hospitalization, people who are older than 65 years, immunocompromised patients, and people who have recently had a diagnosis of CDI. CDI symptoms include, but are not limited to, diarrhea, abdominal pain, and fever. CDI symptoms range in severity from mild (abdominal discomfort, loose stools) to severe (profuse, watery diarrhea, severe pain, and high fevers). Severe CDI can be life-threatening and, in rare cases, can cause bowel rupture, sepsis and organ failure. CDI is responsible for 14,000 deaths per year in the United States.

*C-diff* produces two virulent, pro-inflammatory toxins, Toxin A and Toxin B, which target host colonocytes (that is, large intestine endothelial cells) by binding to endothelial cell surface receptors via combined repetitive oligopeptide (CROP) domains. These toxins cause the release of inflammatory cytokines leading to intestinal fluid secretion and intestinal inflammation. The applicant asserted that ZINPLAVA™ targets Toxin B sites within the CROP domain rather than the *C-diff* organism itself. According to the applicant, by targeting *C-diff* Toxin B, ZINPLAVA™ neutralizes Toxin B, prevents large intestine endothelial cell inflammation, symptoms associated with CDI, and reduces the recurrence of CDI.

ZINPLAVA™ received FDA approval on October 21, 2016, for reduction of recurrence of CDI in adult patients receiving antibacterial drug treatment for CDI and who are at high risk of CDI recurrence. ZINPLAVA™ became commercially available on February 10, 2017. Therefore, the newness period for ZINPLAVA™ began on February 10, 2017. The applicant submitted a request for a unique ICD-10-PCS procedure code and was granted approval for the following procedure codes: XW033A3 (Introduction of bezlotoxumab monoclonal antibody, into peripheral vein, percutaneous approach, new technology group 3) and XW043A3 (Introduction of bezlotoxumab monoclonal antibody, into central vein, percutaneous approach, new technology group 3).

After evaluation of the newness, costs, and substantial clinical improvement criteria for new technology add-on payments for ZINPLAVA™ and consideration of the public comments we received in response to the FY 2018 IPPS/LTCH PPS proposed rule, we approved ZINPLAVA™ for new technology add-on payments for FY 2018 (82 FR 38119). With the new technology add-on payment application, the applicant estimated that the average Medicare beneficiary would require a dosage of 10mg/kg of ZINPLAVA™ administered as an IV infusion over 60 minutes as a single dose. According to the applicant, the WAC for one dose is \$3,800. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment amount for a case involving the use of ZINPLAVA™ is \$1,900.

With regard to the newness criterion for ZINPLAVA™, we considered the beginning of the newness period to commence on February 10, 2017. Because the 3-year anniversary date of the entry of ZINPLAVA™ onto the U.S. market (February 10, 2020) will occur after FY 2019, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20283 through 20284), we proposed to continue new technology add-on payments for this technology for FY 2019. We proposed that the maximum payment for a case involving ZINPLAVA™ would remain at \$1,900 for FY 2019. We invited public comments on our proposal to continue new technology add-on payments for ZINPLAVA™ for FY 2019.

Comment: A few commenters supported CMS' proposal to continue new technology add-on payments for ZINPLAVA™ for FY 2019.

Response: We appreciate the commenters' support. After consideration of the public comments we received, we are finalizing our proposal to continue new technology add-on payments for ZINPLAVA™ for FY 2019. The maximum new technology add-on payment for a case involving ZINPLAVA™ will remain at \$1,900 for FY 2019.

##### 5. FY 2019 Applications for New Technology Add-On Payments

We received 15 applications for new technology add-on payments for FY 2019. In accordance with the regulations under § 412.87(c), applicants for new technology add-on payments must have FDA approval or clearance by July 1 of the year prior to the beginning of the fiscal year that the application is being considered. Since the issuance of the FY 2019 IPPS/LTCH PPS proposed rule, three applicants, Progenics Pharmaceuticals, Inc. (the applicant for AZEDRA®), Somahlution, Inc. (the applicant for DURAGRAFT®), and TherOx, Inc. (the applicant for Supersaturated Oxygen (SSO<sub>2</sub>))

Therapy), withdrew their applications. One applicant, Isoray Medical, Inc. and GT Medical Technologies, Inc. (the applicant for GammaTile™), did not meet the deadline of July 1 for FDA approval or clearance of the technology and, therefore, the technology is not eligible for consideration for new technology add-on payments for FY 2019. A discussion of the remaining 11 applications is presented below.

a. KYMRIA<sup>®</sup> (Tisagenlecleucel) and YESCARTA<sup>®</sup> (Axicabtagene Ciloleucel)

Two manufacturers, Novartis Pharmaceuticals Corporation and Kite Pharma, Inc. submitted separate applications for new technology add-on payments for FY 2019 for KYMRIA (tisagenlecleucel) and YESCARTA (axicabtagene ciloleucel), respectively. Both of these technologies are CD-19-directed T-cell immunotherapies used for the purposes of treating patients with aggressive variants of non-Hodgkin lymphoma (NHL). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20284), we noted that KYMRIA was approved by the FDA on August 30, 2017, for use in the treatment of patients up to 25 years of age with B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse, which is a different indication and patient population than the new indication and targeted patient population for which the applicant submitted a request for approval of new technology add-on payments for FY 2019. Specifically, and as summarized in a table presented in the proposed rule and updated in the following table presented in this final rule, the new indication for which Novartis Pharmaceuticals Corporation is requesting approval for new technology add-on payments for KYMRIA is as an autologous T-cell immune therapy indicated for use in the treatment of patients with relapsed/refractory (r/r) diffuse large B-Cell lymphoma

after two or more lines of systemic therapy including diffuse large B-cell lymphoma (DLBCL) not eligible for autologous stem cell transplant (ASCT). In addition, we indicated that as of the time of the development of the proposed rule, Novartis Pharmaceuticals Corporation had been granted Breakthrough Therapy designation by the FDA, and was awaiting FDA approval for the use of KYMRIAH under this new indication. The updated table that follows reflects that Novartis Pharmaceuticals Corporation received FDA approval for the use of KYMRIAH under this new indication on May 1, 2018. We also noted that Kite Pharma, Inc. previously submitted an application for approval for new technology add-on payments for FY 2018 for KTE-C19 for use as an autologous T-cell immune therapy in the treatment of adult patients with r/r aggressive B-cell NHL who are ineligible for ASCT. However, Kite Pharma, Inc. withdrew its application for KTE-C19 prior to publication of the FY 2018 IPPS/LTCH PPS final rule. Kite Pharma, Inc. resubmitted an application for approval for new technology add-on payments for FY 2019 for KTE-C19 under a new name, YESCARTA, for the same indication. Kite Pharma, Inc. received FDA approval for this original indication and treatment use of YESCARTA on October 18, 2017. (We refer readers to the following updated table for a comparison of the indications and FDA approvals for KYMRIAH and YESCARTA).

**Comparison of Indication and FDA Approval for KYMRIA and YESCARTA**

<b>FY 2019 Applicant Technology Name</b>	<b>Description of Indication for which New Technology Add-on Payments Are Being Requested</b>	<b>FDA Approval Status</b>
KYMRIA (Novartis Pharmaceuticals Corporation)	KYMRIA: Autologous T-cell immune therapy indicated for use in the treatment of patients with relapsed/refractory (r/r) large B-cell lymphoma after two or more lines of systemic therapy including diffuse large B cell lymphoma (DLBCL) not eligible for autologous stem cell transplant (ASCT).	FDA approval received 5/1/2018
YESCARTA (Kite Pharma, Inc.)	YESCARTA: Autologous T-cell immune therapy indicated for use in the treatment of adult patients with r/r large B-cell lymphoma after two or more lines of systemic therapy, including DLBCL not otherwise specified, primary mediastinal large B-cell, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma.	FDA approval received 10/18/2017
<b>Technology Approved for Other Indications</b>	<b>Description of Other Indication</b>	<b>FDA Approval of Other Indication</b>
KYMRIA (Novartis Pharmaceuticals Corporation)	KYMRIA: CD-19-directed T-cell immunotherapy indicated for the use in the treatment of patients up to 25 years of age with B-cell precursor ALL that is refractory or in second or later relapse.	FDA approval received 8/30/2017
YESCARTA (Kite Pharma, Inc.)	None	N/A

We note that procedures involving the KYMRIA and YESCARTA therapies are both reported using the following ICD-10-PCS procedure codes: XW033C3 (Introduction of engineered autologous chimeric antigen receptor t-cell immunotherapy into peripheral vein, percutaneous approach, new technology group 3); and XW043C3 (Introduction of engineered autologous chimeric antigen receptor t-cell immunotherapy into central vein, percutaneous approach, new technology group 3). We further note that, in section II.F.2.d. of the preamble of this final rule, we are finalizing our proposal to assign cases reporting these ICD-10-PCS procedure codes to Pre-MDC MS-DRG 016 for

FY 2019 and to revise the title of this MS-DRG to (Autologous Bone Marrow Transplant with CC/MCC or T-cell Immunotherapy). We refer readers to section II.F.2.d. of the preamble of this final rule for a complete discussion of these final policies.

According to the applicants, patients with NHL represent a heterogeneous group of B-cell malignancies with varying patterns of behavior and response to treatment. B-cell NHL can be classified as either an aggressive, or indolent disease, with aggressive variants including DLBCL; primary mediastinal large B-cell lymphoma (PMBCL); and transformed follicular lymphoma (TFL). Within diagnoses of NHL, DLBCL is the most common subtype of NHL, accounting for approximately 30 percent of patients who have been diagnosed with NHL, and survival without treatment is measured in months.<sup>6</sup> Despite improved therapies, only 50 to 70 percent of newly diagnosed patients are cured by standard first-line therapy alone. Furthermore, r/r disease continues to carry a poor prognosis because only 50 percent of patients are eligible for autologous stem cell transplantation (ASCT) due to advanced age, poor functional status, comorbidities, inadequate social support for recovery after ASCT, and provider or patient choice.<sup>7,8,9,10</sup> Of the roughly 50 percent of patients that are eligible for ASCT, nearly 50 percent fail to

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<sup>6</sup> Chaganti, S., et al., “Guidelines for the management of diffuse large B-cell lymphoma,” BJH Guideline, 2016. Available at: [www.bit.do/bsh-guidelines](http://www.bit.do/bsh-guidelines).

<sup>7</sup> Matasar, M., et al., “Ofatumumab in combination with ICE or DHAP chemotherapy in relapsed or refractory intermediate grade B-cell lymphoma,” *Blood*, 25 July 2013, vol. 122, No 4.

<sup>8</sup> Hitz, F., et al., “Outcome of patients with chemotherapy refractory and early progressive diffuse large B cell lymphoma after R-CHOP treatment,” *Blood* (American Society of Hematology (ASH) annual meeting abstracts, poster session), 2010, pp. 116 (abstract #1751).

<sup>9</sup> Telio, D., et al., “Salvage chemotherapy and autologous stem cell transplant in primary refractory diffuse large B-cell lymphoma: outcomes and prognostic factors,” *Leukemia & Lymphoma*, 2012, vol. 53(5), pp. 836-41.

<sup>10</sup> Moskowitz, C.H., et al., “Ifosfamide, carboplatin, and etoposide: a highly effective cytoreduction and peripheral-blood progenitor-cell mobilization regimen for transplant-eligible patients with non-Hodgkin’s lymphoma,” *Journal of Clinical Oncology*, 1999, vol. 17(12), pp. 3776-85.

respond to prerequisite salvage chemotherapy and cannot undergo ASCT.<sup>11,12,13,14</sup>

Second-line chemotherapy regimens studied to date include rituximab, ifosfamide, carboplatin and etoposide (R-ICE), and rituximab, dexamethasone, cytarabine, and cisplatin (R-DHAP), followed by consolidative high-dose therapy (HDT)/ASCT. Both regimens offer similar overall response rates (ORR) of 51 percent with 1 in 4 patients achieving long-term complete response (CR) at the expense of increased toxicity.<sup>15</sup>

Second-line treatment with dexamethasone, high-dose cytarabine, and cisplatin (DHAP) is considered a standard chemotherapy regimen, but is associated with substantial treatment-related toxicity.<sup>16</sup> For patients who experience disease progression during or after primary treatment, the combination of HDT/ASCT remains the only curative option.<sup>17</sup> According to the applicants, given the modest response to second-line therapy and/or HDT/ASCT, the population of patients with the highest unmet need is those with chemorefractory disease, which include DLBCL, PMBCL, and TFL. These patients are defined as either progressive disease (PD) as best response to chemotherapy, stable

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<sup>11</sup> Crump, M., et al., "Outcomes in patients with refractory aggressive diffuse large B-cell lymphoma (DLBCL): results from the international scholar-1 study," Abstract and poster presented at Pan Pacific Lymphoma Conference (PPLC), July 2016.

<sup>12</sup> Gisselbrecht, C., et al., "Results from SCHOLAR-1: outcomes in patients with refractory aggressive diffuse large B-cell lymphoma (DLBCL)," Oral presentation at European Hematology Association conference, July 2016.

<sup>13</sup> Iams, W., Reddy, N., "Consolidative autologous hematopoietic stem-cell transplantation in first remission for non-Hodgkin lymphoma: current indications and future perspective," *Ther Adv Hematol*, 2014, vol. 5(5), pp. 153-67.

<sup>14</sup> Kantoff, P.W., et al., "Sipuleucel-T immunotherapy for castration-resistant prostate cancer," *N Engl J Med*, 2010, vol. 363, pp. 411-422.

<sup>15</sup> Rovira, J., Valera, A., Colomo, L., et al., "Prognosis of patients with diffuse large B cell lymphoma not reaching complete response or relapsing after frontline chemotherapy or immunochemotherapy," *Ann Hematol*, 2015, vol. 94(5), pp. 803-812.

<sup>16</sup> Swerdlow, S.H., Campo, E., Pileri, S.A., et al., "The 2016 revision of the World Health Organization classification of lymphoid neoplasms," *Blood*, 2016, vol. 127(20), pp. 2375-2390.

<sup>17</sup> Koristka, S., Cartellieri, M., Arndt, C., et al., "Tregs activated by bispecific antibodies: killers or suppressors?," *OncImmunology*, 2015, vol. (3):e994441, DOI: 10.4161/2162402X.2014.994441.

disease as best response following greater than or equal to 4 cycles of first-line or 2 cycles of later-line therapy, or relapse within less than or equal to 12 months of ASCT.<sup>18</sup> Based on these definitions and available data from a multi-center retrospective study (SCHOLAR-1), chemorefractory disease treated with current and historical standards of care has consistently poor outcomes with an ORR of 26 percent and median overall survival (OS) of 6.3 months.<sup>19</sup>

According to Novartis Pharmaceuticals Corporation, the recent FDA approval (on May 1, 2018) for the additional indication allows KYMRIA<sup>®</sup> to be used for the treatment of patients with R/R DLBCL who are not eligible for ASCT. Novartis Pharmaceuticals Corporation describes KYMRIA<sup>®</sup> as a CD-19-directed genetically modified autologous T-cell immunotherapy which utilizes peripheral blood T-cells, which have been reprogrammed with a transgene encoding, a chimeric antigen receptor (CAR), to identify and eliminate CD-19-expressing malignant and normal cells. Upon binding to CD-19-expressing cells, the CAR transmits a signal to promote T-cell expansion, activation, target cell elimination, and persistence of KYMRIA<sup>®</sup> cells. The transduced T-cells expand in vivo to engage and eliminate CD-19-expressing cells and may exhibit immunological endurance to help support long-lasting remission.<sup>20,21,22,23</sup> At the time the

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<sup>18</sup> Crump, M., Neelapu, S.S., Farooq, U., et al., “Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study,” *Blood*, Published online: August 3, 2017, doi: 10.1182/blood-2017-03-769620.

<sup>19</sup> Ibid.

<sup>20</sup> KYMRIA<sup>™</sup> [prescribing information], East Hanover, NJ: Novartis Pharmaceuticals Corp, 2017.

<sup>21</sup> Kalos, M., Levine, B.L., Porter, D.L., et al., “T-cells with chimeric antigen receptors have potent antitumor effects and can establish memory in patients with advanced leukemia,” *Sci Transl Med*, 2011, vol. 3(95), pp, 95ra73.

applicant submitted its application for new technology add-on payments, the applicant conveyed that no other agent currently used in the treatment of patients with r/r DLBCL employs gene modified autologous cells to target and eliminate malignant cells.

According to Kite Pharma, Inc., YESCARTA is indicated for the use in the treatment of adult patients with r/r large B-cell lymphoma after two or more lines of systemic therapy, including DLBCL not otherwise specified, PMBCL, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma. YESCARTA is not indicated for the treatment of patients with primary central nervous system lymphoma. The applicant for YESCARTA described the technology as a CD-19-directed genetically modified autologous T-cell immunotherapy that binds to CD-19-expressing cancer cells and normal B-cells. These normal B-cells are considered to be non-essential tissue, as they are not required for patient survival. According to the applicant, studies demonstrated that following anti-CD-19 CAR T-cell engagement with CD-19-expressing target cells, the CD-28 and CD-3-zeta co-stimulatory domains activate downstream signaling cascades that lead to T-cell activation, proliferation, acquisition of effector functions and secretion of inflammatory cytokines and chemokines. This sequence of events leads to the elimination of CD-19-expressing tumor cells.

Both applicants expressed that their technology is the first treatment of its kind for the targeted adult population. In addition, both applicants asserted that their technology is new and does not use a substantially similar mechanism of action or involve the same

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<sup>22</sup> FDA Briefing Document. Available at: <https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/OncologicDrugsAdvisoryCommittee/UCM566168.pdf>.

<sup>23</sup> Wang, X., Riviere, I., "Clinical manufacturing of CART cells: foundation of a promising therapy," *Mol Ther Oncolytics*, 2016, vol. 3, pp. 16015.

treatment indication as any other currently FDA-approved technology. In the FY 2019 IPPS/LTCH PPS proposed rule, we noted that, at the time each applicant submitted its new technology add-on payment application, neither technology had received FDA approval for the indication for which the applicant requested approval for the new technology add-on payment. We indicated that KYMRIA<sup>®</sup> had been granted Breakthrough Therapy designation for the use in the treatment of patients for the additional indication that is the subject of its new technology add-on application and, as of the time of the development of the proposed rule, was awaiting FDA approval. As noted previously, the applicant for KYMRIA<sup>®</sup> received approval for this additional indication on May 1, 2018. We further noted in the proposed rule that, YESCARTA<sup>®</sup> received FDA approval for use in the treatment of patients and the indication stated in its application on October 18, 2017, after each applicant submitted its new technology add-on payment application.

As noted, according to both applicants, KYMRIA<sup>®</sup> and YESCARTA<sup>®</sup> are the first CAR T-cell immunotherapies of their kind. Because potential cases representing patients who may be eligible for treatment using KYMRIA<sup>®</sup> and YESCARTA<sup>®</sup> would group to the same MS-DRGs (because the same ICD-10-CM diagnosis codes and ICD-10-PCS procedures codes are used to report treatment using either KYMRIA<sup>®</sup> or YESCARTA<sup>®</sup>), and we believed that these technologies are intended to treat the same or similar disease in the same or similar patient population, and are purposed to achieve the same therapeutic outcome using the same or similar mechanism of action, we disagreed with the applicants and believed these two technologies are substantially similar to each other

and that it was appropriate to evaluate both technologies as one application for new technology add-on payments under the IPPS. For these reasons, and as discussed further below, we stated that we intended to make one determination regarding approval for new technology add-on payments that would apply to both applications, and in accordance with our policy, would use the earliest market availability date submitted as the beginning of the newness period for both KYMRIA and YESCARTA. Several public commenters submitted comments regarding whether the technologies are substantially similar to each other in response to the proposed rule and we summarize and respond to the public comments below.

With respect to the newness criterion, as previously stated, YESCARTA received FDA approval on October 18, 2017. According to the applicant, prior to FDA approval, YESCARTA had been available in the U.S. only on an investigational basis under an investigational new drug (IND) application. For the same IND patient population, and until commercial availability, YESCARTA was available under an Expanded Access Program (EAP) which started on May 17, 2017. The applicant stated that it did not recover any costs associated with the EAP. According to the applicant, the first commercial shipment of YESCARTA was received by a certified treatment center on November 22, 2017. As discussed previously, KYMRIA received FDA approval May 1, 2018, for use in the treatment of patients diagnosed with r/r DLBCL that are not eligible for ASCT. Additionally, as noted in the proposed rule, KYMRIA was previously granted Breakthrough Therapy designation by the FDA. We stated in the proposed rule that we believe that, in accordance with our policy, if these technologies

are substantially similar to each other, it is appropriate to use the earliest market availability date submitted as the beginning of the newness period for both technologies. Therefore, based on our policy, with regard to both technologies, if the technologies are approved for new technology add-on payments, we stated that we believe that the beginning of the newness period would be November 22, 2017.

We stated in the proposed rule that, because we believe these two technologies are substantially similar to each other, we believe it is appropriate to evaluate both technologies as one application for new technology add-on payments under the IPPS. The applicants submitted separate cost and clinical data, and we reviewed and discussed each set of data separately. However, we stated that we intended to make one determination regarding new technology add-on payments that would apply to both applications. We stated that we believe that this is consistent with our policy statements in the past regarding substantial similarity. Specifically, we have noted that approval of new technology add-on payments would extend to all technologies that are substantially similar (66 FR 46915), and we believe that continuing our current practice of extending new technology add-on payments without a further application from the manufacturer of the competing product, or a specific finding on cost and clinical improvement if we make a finding of substantial similarity among two products is the better policy because we avoid—

- Creating manufacturer-specific codes for substantially similar products;
- Requiring different manufacturers of substantially similar products to submit separate new technology add-on payment applications;

- Having to compare the merits of competing technologies on the basis of substantial clinical improvement; and
- Bestowing an advantage to the first applicant representing a particular new technology to receive approval (70 FR 47351).

We stated that, if substantially similar technologies are submitted for review in different (and subsequent) years, rather than the same year, we would evaluate and make a determination on the first application and apply that same determination to the second application. However, we stated that, because the technologies have been submitted for review in the same year and we believe they are substantially similar to each other, we believe that it is appropriate to consider both sets of cost data and clinical data in making a determination, and we do not believe that it is possible to choose one set of data over another set of data in an objective manner. We received public comments regarding our proposal to evaluate KYMRIA and YESCARTA as one application for new technology add-on payments under the IPPS and we summarize and respond to these public comments below.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20284), we stated that we believe that KYMRIA and YESCARTA are substantially similar to each other for purposes of analyzing these two applications as one application. As discussed in the proposed rule, we stated that we also need to determine whether KYMRIA and YESCARTA are substantially similar to existing technologies prior to their approval by the FDA and their release onto the U.S. market. As discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially

similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

With respect to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant for KYMRIA<sup>®</sup> asserted that its unique design, which utilizes features that were not previously included in traditional cytotoxic chemotherapeutic or immunotherapeutic agents, constitutes a new mechanism of action. The deployment mechanism allows for identification and elimination of CD-19-expressing malignant and non-malignant cells, as well as possible immunological endurance to help support long-lasting remission.<sup>24,25,26,27</sup> The applicant provided context regarding how KYMRIA<sup>®</sup>'s unique design contributes to a new mechanism of action by explaining that peripheral blood T-cells, which have been reprogrammed with a transgene encoding, a CAR, identify and eliminate CD-19-expressing malignant and nonmalignant cells. As explained by the applicant, upon binding to CD-19-expressing cells, the CAR transmits a signal to promote T-cell expansion, activation, target cell elimination, and persistence of KYMRIA<sup>®</sup> cells.<sup>28,29,30</sup>

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<sup>24</sup> KYMRIA<sup>®</sup> [prescribing information]. East Hanover, NJ: Novartis Pharmaceuticals Corp; 2017.

<sup>25</sup> Kalos, M., Levine, B.L., Porter, D.L., et al., “T cells with chimeric antigen receptors have potent antitumor effects and can establish memory in patients with advanced leukemia,” *Sci Transl Med*, 2011, vol. 3(95), pp. 95ra73.

<sup>26</sup> FDA Briefing Document. Available at: <https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/OncologicDrugs/AdvisoryCommittee/UCM566168.pdf>.

<sup>27</sup> Maude, S.L., Frey, N., Shaw, P.A., et al., “Chimeric antigen receptor T cells for sustained remissions in leukemia,” *N Engl J Med*, 2014, vol. 371(16), pp. 1507-1517.

<sup>28</sup> KYMRIA<sup>®</sup> [prescribing information], East Hanover, NJ: Novartis Pharmaceuticals Corp, 2017.

<sup>29</sup> Kalos, M., Levine, B.L., Porter, D.L., et al., “T-cells with chimeric antigen receptors have potent antitumor effects and can establish memory in patients with advanced leukemia,” *Sci Transl Med*, 2011, 3(95), pp, 95ra73.

According to the applicant, transduced T-cells expand in vivo to engage and eliminate CD-19-expressing cells and may exhibit immunological endurance to help support long-lasting remission.<sup>31,32,33</sup>

The applicant for YESCARTA stated that YESCARTA is the first engineered autologous cellular immunotherapy comprised of CAR T-cells that recognizes CD-19 express cancer cells and normal B-cells with efficacy in patients with r/r large B-cell lymphoma after two or more lines of systemic therapy, including DLBCL not otherwise specified, PMBCL, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma as demonstrated in a multi-centered clinical trial. Therefore, the applicant believed that YESCARTA's mechanism of action is distinct and unique from any other cancer drug or biologic that is currently approved for use in the treatment of patients who have been diagnosed with aggressive B-cell NHL, namely single-agent or combination chemotherapy regimens. At the time of the development of the proposed rule, the applicant also pointed out that YESCARTA was the only available therapy that has been granted FDA approval for the treatment of adult patients with r/r large B-cell lymphoma after two or more lines of systemic therapy, including DLBCL not otherwise specified, PMBCL, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma.

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<sup>30</sup> FDA Briefing Document. Available at: <https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/OncologicDrugsAdvisoryCommittee/UCM566168.pdf>.

<sup>31</sup> Kalos, M., Levine, B.L., Porter, D.L., et al., "T cells with chimeric antigen receptors have potent antitumor effects and can establish memory in patients with advanced leukemia," *Sci Transl Med*, 2011, vol. 3(95), pp. 95rs73.

<sup>32</sup> FDA Briefing Document. Available at: <https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/OncologicDrugsAdvisoryCommittee/UCM566168.pdf>.

<sup>33</sup> Maude, S.L., Frey, N., Shaw, P.A., et al., "Chimeric antigen receptor T-cells for sustained remissions in leukemia," *N Engl J Med*, 2014, vol. 371(16) pp. 1507-1517.

With respect to the second and third criteria, whether a product is assigned to the same or a different MS-DRG and whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant for KYMRIAHA indicated that the technology is used in the treatment of the same patient population, and potential cases representing patients that may be eligible for treatment using KYMRIAHA would be assigned to the same MS-DRGs as cases involving patients with a DLBCL diagnosis. Potential cases representing patients that may be eligible for treatment using KYMRIAHA map to 437 separate MS-DRGs, with the top 20 MS-DRGs covering approximately 68 percent of all patients who have been diagnosed with DLBCL. For patients with DLBCL and who have received chemotherapy during their hospital stay, the target population mapped to 8 separate MS-DRGs, with the top 2 MS-DRGs covering over 95 percent of this population: MS-DRGs 847 (Chemotherapy without Acute Leukemia as Secondary Diagnosis with CC), and 846 (Chemotherapy without Acute Leukemia as Secondary Diagnosis with MCC). The applicant for YESCARTA submitted findings that potential cases representing patients that may be eligible for treatment using YESCARTA span 15 unique MS-DRGs, 8 of which contain more than 10 cases. The most common MS-DRGs were: MS-DRGs 840 (Lymphoma and Non-Acute Leukemia with MCC), 841 (Lymphoma and Non-Acute Leukemia with CC), and 823 (Lymphoma and Non-Acute Leukemia with other O.R. Procedures with MCC). These 3 MS-DRGs accounted for 628 (76 percent) of the 827 cases. While the applicants for KYMRIAHA and YESCARTA submitted different findings regarding the most common MS-DRGs to which potential

cases representing patients who may be eligible for treatment involving their technology would map, we stated in the proposed rule that we believe that, under the current MS-DRGs (FY 2018), potential cases representing patients who may be eligible for treatment involving either KYMRIAHA or YESCARTA would map to the same MS-DRGs because the same ICD-10-CM diagnosis codes and ICD-10-PCS procedure codes will be used to report cases for patients who may be eligible for treatment involving KYMRIAHA and YESCARTA. Furthermore, as noted above, we proposed, and are finalizing, that cases reporting these ICD-10-PCS procedure codes would be assigned to MS-DRG 016 for FY 2019. Therefore, under this proposal (and our finalized policy), for FY 2019, cases involving the utilization of KYMRIAHA and YESCARTA would continue to map to the same MS-DRGs.

The applicant for YESCARTA also addressed the concern expressed by CMS in the FY 2018 IPPS/LTCH PPS proposed rule regarding Kite Pharma Inc.'s FY 2018 new technology add-on payment application for the KTE-C19 technology (82 FR 19888). At the time, CMS expressed concern that KTE-C19 may use the same or similar mechanism of action as the Bi-Specific T-Cell engagers (BiTE) technology. The applicant for YESCARTA explained that YESCARTA has a unique and distinct mechanism of action that is substantially different from BiTE's or any other drug or biologic currently assigned to any MS-DRG in the FY 2016 MedPAR Hospital Limited Data Set. In providing more detail regarding how YESCARTA is different from the BiTE technology, the applicant explained that the BiTE technology is not an engineered autologous T-cell immunotherapy derived from a patient's own T-cells. Instead, it is a bi-specific T-cell

engager that recognizes CD-19 and CD-3 cancer cells. Unlike engineered T-cell therapy, BiTE does not have the ability to enhance the proliferative and cytolytic capacity of T-cells through ex-vivo engineering. Further, BiTE is approved for the treatment of patients who have been diagnosed with Philadelphia chromosome-negative relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL) and is not approved for patients with relapsed or refractory large B-cell lymphoma, whereas YESCARTA is indicated for use in the treatment of adult patients with r/r aggressive B-cell NHL who are ineligible for ASCT.

The applicant for YESCARTA also indicated that its mechanism of action is not the same or similar to the mechanism of action used by KYMRIA<sup>H</sup>'s currently available FDA-approved CD-19-directed genetically modified autologous T-cell immunotherapy indicated for use in the treatment of patients up to 25 years of age with B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse.<sup>34</sup> The applicant for YESCARTA stated that the mechanism of action is different from KYMRIA<sup>H</sup>'s FDA-approved therapy because the spacer, transmembrane and co-stimulatory domains of YESCARTA are different from those of KYMRIA<sup>H</sup>. The applicant explained that YESCARTA is comprised of a CD-28 co-stimulatory domain and KYMRIA<sup>H</sup> has 4-1BB co-stimulatory domain. Further, the applicant stated the manufacturing processes of the two immunotherapies are also different, which may result in cell composition differences leading to possible efficacy and safety differences.

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<sup>34</sup> Food and Drug Administration. Available at: [www.accessdata.fda.gov/scripts/opdlisting/ood/](http://www.accessdata.fda.gov/scripts/opdlisting/ood/).

We stated in the proposed rule that while the applicant for YESCARTA stated how its technology is different from KYMRIA, because both technologies are CD-19-directed T-cell immunotherapies used for the purpose of treating patients with aggressive variants of NHL, we believe that YESCARTA and KYMRIA are substantially similar treatment options. Furthermore, in the FY 2019 IPPS/LTCH PPS proposed rule, we also stated that we were concerned there may be an age overlap (18 to 25) between the two different patient populations for the currently approved KYMRIA technology and YESCARTA technology. We stated in the proposed rule, which was issued prior to the approval for a second indication (adult patients), that the indication for the KYMRIA technology is for use in the treatment of patients who are up to 25 years of age and the YESCARTA technology is indicated for use in the treatment of adult patients.

We noted in the proposed rule that the applicant asserted that YESCARTA is not substantially similar to KYMRIA. We stated that under this scenario, if both YESCARTA and KYMRIA meet all of the new technology add-on payment criteria and are approved for new technology add-on payments for FY 2019, for purposes of making the new technology add-on payment, because procedures utilizing either YESCARTA or KYMRIA CAR T-cell therapy drugs are reported using the same ICD-10-PCS procedure codes, in order to accurately pay the new technology add-on payment to hospitals that perform procedures utilizing either technology, it may be necessary to use alternative coding mechanisms to make the new technology add-on payments. In the FY 2019 IPPS/LTCH PPS proposed rule, CMS invited comments on alternative coding mechanisms to make the new technology add-on payments, if necessary.

We also invited public comments on whether KYMRIA and YESCARTA are substantially similar to existing technologies and whether the technologies meet the newness criterion.

Comment: The applicants for KYMRIA and YESCARTA each provided comments regarding whether KYMRIA and YESCARTA were substantially similar to the other, or to any existing technology. Additional commenters also submitted comments.

The applicant for YESCARTA stated that it continued to believe each technology consists of notable differences in the construction, as well as manufacturing processes and successes that may lead to differences in activity. The applicant encouraged CMS to evaluate YESCARTA as a separate new technology add-on payment application and approve separate new technology add-on payments for YESCARTA, effective October 1, 2018, and to not move forward with a single new technology add-on payment evaluation determination that covers both CAR T-cell therapies, YESCARTA and KYMRIA. The applicant stated that the transmembrane domain of YESCARTA is comprised of a fragment of CD-28 co-stimulatory molecule, including an extracellular hinge domain, which provides structural flexibility for optimal binding of the target antigen by the scFV target binding region. The applicant further stated that, in contrast, KYMRIA consists of a spacer and a transmembrane domain, which are derived from CD8-a. The applicant for YESCARTA believed that, the spacer provides a flexible link between the scFv and the transmembrane domain, which then accommodates different orientations of the antigen binding domain upon CD19 antigen recognition. The applicant stated that these

differences in the origin of the transmembrane component between the YESCARTA and KYMRIAH may be one of the differences which lead to differentiation in CAR function and resulting activity between the two CAR constructs, which will be described later in this section.

The applicant for YESCARTA believed perhaps the most critical difference between the two technologies, YESCARTA and KYMRIAH, may be that of the co-stimulatory domains, which connect the extracellular scFv antigen binding domain to the cytoplasmic CD3-zeta downstream signaling domain. The applicant explained that, for YESCARTA, the technology is derived from the intracellular domains of co-stimulatory protein CD-28. However, for KYMRIAH, in contrast, the technology is derived from the co-stimulatory protein 4-1BB (CD137). The applicant believed that, although clear mechanisms are unknown, it is surmised that the difference in co-stimulatory region of the two CAR products may be responsible for differences in activity. The applicant stated that the ongoing hypothesis for these differences are based on differentially affecting CAR T-cell cytokine production, expansion, cytotoxicity and persistence after administration.

The applicant for YESCARTA also described an additional concept regarding the manufacturing process that it believed supported why the two technologies were different. The applicant explained that both, YESCARTA and KYMRIAH, are prepared from the patient's peripheral blood mononuclear cells, which are obtained via a standard leukapheresis procedure. However, the applicant stated that, with YESCARTA, the mononuclear cells are then enriched for T-cells and activated with anti-CD-3 antibody in

the presence of IL-2 then transduced with the replication incompetent  $\gamma$ -retroviral vector containing the anti-CD-19 CAR transgene. The applicant further explained that the transduced T-cells are expanded in cell culture, washed, formulated into a suspension, and cryopreserved. The applicant for YESCARTA believed that, in contrast, KYMRIAH uses anti CD-3/anti CD-28 coated magnetic beads for T-cell enrichment and activation, rather than anti-CD-3 antibody and IL-2, which are removed after CAR T-cell expansion and prior to harvest. The applicant explained that a further difference in the manufacturing of KYMRIAH is the use of lentiviral vector in the anti-CD-19 CAR gene transduction rather than a  $\gamma$ -retroviral vector, as used for YESCARTA in manufacturing. The applicant stated that both  $\gamma$ -retroviral or lentiviral vectors can permanently insert DNA into the genome. However, lentiviral vectors are capable of transducing quiescent cells, while  $\gamma$ -retroviral vectors require cells in mitosis. According to the applicant, the manufacturing success in clinical trials is also different with results showing median turnaround time of 17 days for YESCARTA, with 99 percent success rate versus median turnaround time of 113 days, with 93 percent success rate for KYMRIAH.

The applicant for YESCARTA further stated that, if CMS decides to establish one new technology add-on payment determination and approval for both CAR T-cell therapies, the add-on payments should be structured to ensure that payment does not hinder access in any way for patients to receive the most appropriate cell therapy and use of YESCARTA and KYMRIAH can be uniquely and individually identified in the Medicare inpatient data.

Other commenters believed that the two CAR T-cell technologies should be considered as separate new technology add-on payment applications because the technologies' indications are approved for two different patient populations and diagnoses. The commenters stated that, while the approval for one of the diagnoses for adults is the same for KYMRIAH and YESCARTA, KYMRIAH has also been approved for treating children and, therefore, that should be reasoning to consider the application separately. Additionally, commenters stated that the pricing of both medications varies based on the patient population, and encouraged CMS to recognize this discrepancy when determining approval of new technology add-on payment and establishing adequate payments rates. Commenters agreed with CMS' conclusion that it is appropriate to consider both sets of cost and clinical data when determining whether the standard criteria for new technology add-on payments for KYMRIAH and YESCARTA were met, but also encouraged CMS to consider evaluation and determination of both technologies as separate applications.

Some commenters disagreed with CMS' views of the YESCARTA and KYMRIAH with respect to substantial similarity and expressed concerns with CMS' conclusion that the two CAR T-cell therapies are substantially similar to each other. The commenters believed that, because each therapy has received separate FDA Breakthrough designations, is approved based on separate Biological License Applications, and may likely be used in the treatment of different patient populations in different sites of care, consideration for approval of new technology add-on payments should be based on separate applications. Commenters further believed that, for purposes

of meeting the newness criterion, each new technology add-on payment application must be treated as being unique. Despite these concerns, commenters supported CMS creating a new MS-DRG for procedures and cases representing patients receiving treatment involving CAR T-cell therapies, and recognized that each of the CAR T-cell therapies would be used in the treatment of cases representing patients that would be assigned to the same MS-DRG.

Several commenters disagreed with CMS' determination that the applications for KYMRIA and YESCARTA are similar enough to warrant consideration as a single new technology add-on payment application, and recommended CMS consider the applications separately. Commenters believed that because KYMRIA received FDA approval for the use in the treatment of patients diagnosed with r/r DLBCL on May 1, 2018, the beginning of the newness period for KYMRIA for cases reporting the ICD-10-PCS procedure codes representing patients diagnosed with r/r DLBCL should not be the same as YESCARTA, which began November 22, 2017. Commenters stated that equating the two beginning dates for the start of the newness periods will prematurely shorten the new technology add-on payment period for KYMRIA's new patient population, which commenters believed would wrongfully withhold anticipated payments from hospitals. Commenters also recommended that, if CMS finalized its position to consider KYMRIA and YESCARTA as one application, to use the approval date for KYMRIA as the beginning of the newness period to avoid any inappropriate shortening of the new technology add-on payment length.

Other commenters further cautioned CMS that combining the new technology add-on payment applications' evaluation and determination for these two therapies would create precedent that may make it unlikely for future CAR T-cell therapies to be considered distinct from existing CAR T-cell therapies, or substantially similar. As a result, the commenters believed that, if CMS finalized its proposal to make a combined decision for KYMRIAH and YESCARTA, it is more likely that future CAR T-cell therapies will not qualify for new technology add-on payments. The commenters noted that, to mitigate any potential negative impact if CMS combines both the applications and makes its determination, it would be important for CMS to leave open the option for future CAR T-cell therapies to apply for and receive approval of new technology add-on payments, regardless of the decision made for the current applications under consideration.

Some commenters believed that section 1886(d)(5)(K) of the Act does not appear to clearly authorize CMS to jointly evaluate KYMRIAH and YESCARTA, which were submitted by separate manufacturers, as separate new technology add-on payment applications for two different products approved by FDA under two separate Biologics License Applications with distinct clinical and cost data submissions. The commenters believed that CMS' assessment appeared concentrated on a handful of perceived similarities in the mechanism of action and the patient and disease categories between the two newly approved CAR T-cell products. Commenters stated that this focused approach appeared to give little weight to the distinctions in the manufacturing process and co-stimulatory domains between the two CAR T-cell therapies, which obscures the

important distinctions in how the different CAR T-cell technologies have been refined and optimized. The commenters further stated that CMS' evaluation also does not fully account for the difference in clinical profiles of these two agents.

Other commenters believed that failure to recognize the legitimate distinctions and technological innovations reflected by CAR T-cell therapy—and inherent across different CAR T-cell treatments, such as KYMRIAH and YESCARTA, could artificially restrict access to new technology add-on payments for these new and promising technologies. Commenters recommended CMS encourage development of medical innovation by applying the new technology add-on payment “newness” criterion in a way that recognizes the unique, novel, and distinct nature of the CAR T-cell technology.

In evaluating the new technology add-on payment applications for KYMRIAH and YESCARTA, some commenters believed that CMS may be overlooking the significant ways these two technologies represent a substantial medical advancement compared to existing therapies, most of which patients have already failed, before they go on to receive treatment involving CAR T-cell therapy. The commenters stated that CMS appeared to be unduly focusing on the perceived similarities between the two newly approved CAR T-cell therapies versus the advancement the technologies represent over existing therapies. The commenters encouraged CMS to recognize the ways in which KYMRIAH and YESCARTA significantly differ from existing technologies and to further apply the “newness” eligibility requirement for new technology add-on payments in a manner that does not unnecessarily discourage the availability of new technology

add-on payments for these newly approved CAR T-cell therapies that represent significant clinical advantages over existing treatments.

The applicant for KYMRIA<sup>®</sup> stated that, at the time it submitted its new technology add-on payment application and as summarized in the FY 2019 IPPS/LTCH PPS proposed rule, similar to the applicant for YESCARTA, it believed the two technologies were not substantially similar to the other, or to other cancer drugs or biologics currently approved for use in the treatment of aggressive B-cell NHL and, therefore, met the newness criterion. However, the applicant acknowledged that, since the date it submitted its new technology add-on payment application both technologies, YESCARTA and KYMRIA<sup>®</sup>, have received FDA approval for the technologies' intended indications. The applicant for KYMRIA<sup>®</sup> further indicated that, based on FDA's recent approval, it agreed with CMS that KYMRIA<sup>®</sup> is substantially similar to YESCARTA, as defined by the new technology add-on payment application evaluation criteria.

The applicant for KYMRIA<sup>®</sup> detailed how it believed the technology is substantially similar to YESCARTA with respect to each criterion pertaining to substantial similarity.

With regard to the first criterion, whether YESCARTA and KYMRIA<sup>®</sup> use the same or a similar mechanism of action to achieve a therapeutic action, the applicant stated that, although KYMRIA<sup>®</sup>'s and YESCARTA's mechanisms of actions are distinct and unique from any other cancer drug or biologic that is currently FDA-approved, namely single-agent or combination chemotherapy regimens, the applicant believed

KYMRIAH and YESCARTA use the same or similar mechanisms of action to achieve the therapeutic outcome. To further support the assertion that the two technologies are substantially similar to one another, the applicant for KYMRIAH also provided the FDA-approved prescribing information (“12.1 Mechanism of Action”) issued for KYMRIAH and YESCARTA describing the mechanisms of actions as being the same or similar for both technologies in the following manner:

- *KYMRIAH: KYMRIAH is a CD19-directed genetically modified autologous T cell immunotherapy which involves reprogramming a patient’s own T cells with a transgene encoding a chimeric antigen receptor (CAR) to identify and eliminate CD-19-expressing malignant and normal cells. The CAR is comprised of a murine single-chain antibody fragment which recognizes CD-19 and is fused to intracellular signaling domains from 4-1BB (CD137) and CD3 zeta. The CD3 zeta component is critical for initiating T-cell activation and antitumor activity, while 4-1BB enhances the expansion and persistence of KYMRIAH. Upon binding to CD-19-expressing cells, the CAR transmits a signal to promote T-cell expansion, activation, target cell elimination, and persistence of the KYMRIAH cells.*

- *YESCARTA: YESCARTA, a CD-19-directed genetically modified autologous T-cell immunotherapy, binds to CD-19-expressing cancer cells and normal B cells. Studies demonstrated that following anti-CD-19 CAR T cell engagement with CD-19-expressing target cells, the CD28 and CD3-zeta co-stimulatory domains activate downstream signaling cascades that lead to T-cell activation, proliferation, acquisition of*

*effector functions and secretion of inflammatory cytokines and chemokines. This sequence of events leads to killing of CD-19-expressing cells.*

In a summary of the FDA-approved prescribing information, the applicant further noted that, within the FDA-approved prescribing information, both KYMRIAH and YESCARTA are CD-19-directed genetically modified autologous T-cell immunotherapies that bind to CD-19-expressing cancer cells and normal B cells. Upon binding to CD-19-expressing cells, the respective CARs transmit a signal to promote T cell expansion, activation, and target cell elimination.

In response to the differences between KYMRIAH and YESCARTA related to spacer, transmembrane and co-stimulatory domains, which were stated by the applicant for YESCARTA, the applicant for KYMRIAH believed that, although there are structural differences that impact aspects of how the treatment effect is achieved, the overall mechanisms of actions of the two CAR T-cell therapy products are similar. The applicant explained that in defining drug classes, the FDA provided guidance that a class defined by mechanism of action would include drugs that have similar pharmacologic action at the receptor, membrane or tissue level. The applicant indicated that KYMRIAH is a cellular immunotherapy generated by gene modification of autologous donor T-cells. Further, the applicant for KYMRIAH stated that through the process of apheresis, leukocytes are harvested from the patient and undergo a process of ex-vivo gene transfer in which a CAR is introduced by lentiviral transduction. The applicant further explained that the CAR construct contains an antigen binding region designed to target CD-19, a co-stimulatory domain known as 4-1BB and a signaling domain called CD-3-zeta. The

applicant stated that once transferred, the patient's T-cells will express the CAR construct anti-CD-19 4-1BB/CD-3-zeta, and undergo ex-vivo expansion. The applicant for KYMRIAH stated that both, KYMRIAH and YESCARTA, utilize a gene transfer process to modify autologous patient immune cells with a chimeric antigen receptor capable of directing immune mediated killing at a pre-specified target. The applicant further explained that both technologies accomplish their pharmacological effect through the use of three specialized domains, which are structurally different, but achieve similar environmental interactions. The applicant indicated that, in both agents, the antigen binding domain identifies CD-19 and, therefore, the interaction between the agent and its environment begins with the same receptor target interaction. Additionally, the applicant noted that both KYMRIAH and YESCARTA induce T-cell mediated cell death of the bound tumor cell by activating the T-cell expressing the CAR through the signaling domain, which is common to both agents and, therefore, at the tissue level, both generate a pharmacological impact by producing T-cell mediated apoptosis. The applicant for KYMRIAH stated that the pharmacological effect of these two agents is attained through tumor directed expansion of CAR T-cells and the development of memory T-cells that allow for potential long-term persistence and immunosurveillance. The applicant believed that, in both agents, this is achieved through the use of a co-stimulatory domain, which leads to the secretion of inflammatory substances such as cytokines, chemokines and growth factors, which induce T-cell proliferation and differentiation. The applicant for KYMRIAH stated that, although it agreed with the applicant for YESCARTA's assertion that 41BB and CD-28 are both structurally and functionally different and that at

a micro level they generate a different metabolic profile and stimulate different types of memory T-cell, on a macroscopic level the general impact is “substantially similar” in that the mechanisms of actions allow for expansion and memory, which yield tumor-directed killing of the target tissue and memory T-cell generation for longer duration response that can be expected with a traditional biologic agent. The applicant further believed that, while the manufacturing process, safety and efficacy outcomes of any two members of a class of drugs may differ, these factors do not impact the mechanism of action.

With regard to the second criterion, whether YESCARTA and KYMRIAHA will be assigned to the same or a different MS-DRG, the applicant stated that this criterion is met because cases representing patients eligible for treatment involving both, KYMRIAHA and YESCARTA, will be reported using the same ICD-10-PCS procedure codes (XW033C3 and XW043C3) and will be assigned to the same MS-DRG--Pre-MDC MS-DRG 016 (as discussed in section II.F.2.d. of the preamble of this final rule).

With regard to the third criterion, whether YESCARTA<sup>®</sup> and KYMRIAHA<sup>®</sup> will be used to treat the same or similar patient population, the applicant stated that both, KYMRIAHA and YESCARTA, are FDA approved to treat adult patients diagnosed with r/r aggressive B-cell NHL in the same or similar patient population. The applicant, in summary, agreed with CMS’ conclusion that KYMRIAHA is “substantially similar” to YESCARTA, as defined by CMS, because both technologies are: (1) intended to treat the same or similar disease in the same or similar patient population; (2) purposed to achieve the same therapeutic outcome using the same or similar mechanism of action;

and (3) would be assigned to the same MS-DRGs. However, the applicant stated that, despite being “substantially similar” technologies, KYMRIA and YESCARTA are not “substantially similar” to any other existing technology and, therefore, it believed KYMRIA met the newness criterion.

Other commenters, generally, agreed that both, KYMRIA and YESCARTA, are substantially similar technologies. One commenter stated that it agreed with CMS’ approach on both clinical and policy grounds because given the promises and perils of both therapies, the surrounding coverage and payment issues present to be the same and that will also be the case for the successor drugs expected to soon achieve FDA approval and enter the U.S. market. The commenter explained that consideration of KYMRIA and YESCARTA as one new technology add-on payment application simplifies the newness test because both technologies were assigned an ICD-10-PCS procedure code in 2017, and cases involving the utilization of the technologies and procedures reporting the ICD-10-PCS procedure codes will be assigned to the same MS-DRG, effective with the beginning of FY 2019 on October 1, 2018. The commenter also noted that, CMS indicated that November 22, 2017, would be the beginning date for the “newness” period because it marks the first delivery of YESCARTA to eligible treatment centers. The commenter believed this date was somewhat arbitrary, but did not provide an alternative date for consideration and, therefore, agreed that KYMRIA and YESCARTA should be considered together as one new technology add-on payment application, both technologies met the criterion for newness, and the newness period appropriately begins on November 22, 2017. The commenter stated that, if approved for new technology add-

on payments, this newness period should grant CMS and the public sufficient time under the MS-DRG recalibration and the new technology add-on payment policies to determine whether MS-DRG 016 is an appropriate MS-DRG assignment for payment of CAR T-cell therapies.

Response: We appreciate all the commenters' input and the additional detail regarding whether KYMRIAH and YESCARTA are substantially similar to each other and existing technologies.

After consideration of the public comments we received, although we recognize the technologies are not completely the same in terms of their manufacturing process, co-stimulatory domains, and clinical profiles, we and also as the commenters expressed, are not convinced that these differences result in the use of a different mechanism of action and, therefore, infer that the two technologies' mechanisms of action are the same. Furthermore, we believe that KYMRIAH and YESCARTA are substantially similar to one another because potential cases representing patients who may be eligible for treatment using KYMRIAH and YESCARTA would group to the same MS-DRGs (because the same ICD-10-CM diagnosis codes and ICD-10-PCS procedures codes are used to report treatment using either KYMRIAH or YESCARTA). We also believe, as we and other commenters describe throughout this section, that these technologies are intended to treat the same or similar disease in the same or similar patient population -- patients with r/r DLBCL who are ineligible for, or who have failed ASCT, and are purposed to achieve the same therapeutic outcome--ORR, CR, OS using the same or similar mechanism of action using genetically modified autologous T-cell

immunotherapies. The respective CAR T-cells transmit a signal to promote T-cell expansion, activation, and ultimately cancer cell elimination to produce a targeted cellular therapy that may persist in the body even after the malignancy is eradicated.

We also believe that KYMRIA<sup>®</sup> and YESCARTA<sup>®</sup> are not substantially similar to any other existing technologies because, as both applicants asserted in their FY 2019 new technology add-on payment applications and as stated by the other commenters, the technologies do not use the same or similar mechanism of action to achieve a therapeutic outcome as any other existing drug or therapy assigned to the same or different MS-DRG and represent the only FDA-approved technologies for this treatment population.

With regard to the commenter that indicated pricing of both products varies based on the patient population, and encouraged CMS to recognize this discrepancy when determining approval of new technology add-on payment and establishing adequate payments rates, we note that the applicants for both, KYMRIA<sup>®</sup> and YESCARTA<sup>®</sup>, estimate that the average cost for an administered dose of KYMRIA<sup>®</sup> or YESCARTA<sup>®</sup> is \$373,000. We refer readers to the end of this discussion for complete details on the pricing of KYMRIA<sup>®</sup> and YESCARTA<sup>®</sup>.

With respect to CMS' policy for evaluating substantially similar technologies, we believe our current policy is consistent with the authority and criteria in section 1886(d)(5)(K) of the Act. We note that CMS is authorized by the Act to develop criteria for the purposes of evaluating new technology add-on payment applications. For the purposes of new technology add-on payments, when technologies are substantially similar to each other, we believe it is appropriate to evaluate both technologies as one

application for new technology add-on payments under the IPPS, for the reasons we discussed above and consistent with our evaluation of substantially similar technologies in prior rulemaking (82 FR 38120).

Finally, we note that for FY 2019, there is no payment impact regarding the determination that the two technologies are substantially similar to each other because the cost of the technologies is the same. However, we welcome additional comments in future rulemaking regarding whether KYMRIA and YESCARTA are substantially similar and intend to revisit this issue in next year's proposed rule.

As we stated in the proposed rule and above, each applicant submitted separate analysis regarding the cost criterion for each of their products, and both applicants maintained that their product meets the cost criterion. We summarize each analysis below.

With regard to the cost criterion, the applicant for KYMRIA searched the FY 2016 MedPAR claims data file to identify potential cases representing patients who may be eligible for treatment using KYMRIA. The applicant identified claims that reported an ICD-10-CM diagnosis code of: C83.30 (DLBCL, unspecified site); C83.31 (DLBCL, lymph nodes of head, face and neck); C83.32 (DLBCL, intrathoracic lymph nodes); C83.33 (DLBCL, intra-abdominal lymph nodes); C83.34 (DLBCL, lymph nodes of axilla and upper limb); C83.35 (DLBCL, lymph nodes of inguinal region and lower limb); C83.36 (DLBCL, intrapelvic lymph nodes); C83.37 (DLBCL, spleen); C83.38 (DLBCL, lymph nodes of multiple sites); or C83.39 (DLBCL, extranodal and solid organ sites). The applicant also identified potential cases where patients received chemotherapy

using two encounter codes, Z51.11 (Antineoplastic chemotherapy) and Z51.12 (Antineoplastic immunotherapy), in conjunction with DLBCL diagnosis codes.

Applying the parameters above, the applicant for KYMRIA<sup>®</sup> identified a total of 22,589 DLBCL potential cases that mapped to 437 MS-DRGs. The applicant chose the top 20 MS-DRGs which made up a total of 15,451 potential cases at 68 percent of total cases. Of the 22,589 total DLBCL potential cases, the applicant also provided a breakdown of DLBCL potential cases where chemotherapy was used, and DLBCL potential cases where chemotherapy was not used. Of the 6,501 DLBCL potential cases where chemotherapy was used, MS-DRGs 846 and 847 accounted for 6,181 (95 percent) of the 6,501 cases. Of the 16,088 DLBCL potential cases where chemotherapy was not used, the applicant chose the top 20 MS-DRGs which made up a total of 9,333 potential cases at 58 percent of total cases. The applicant believed the distribution of patients that may be eligible for treatment using KYMRIA<sup>®</sup> will include a wide variety of MS-DRGs. As such, the applicant conducted an analysis of three scenarios: potential DLBCL cases, potential DLBCL cases with chemotherapy, and potential DLBCL cases without chemotherapy.

The applicant removed reported historic charges that would be avoided through the use of KYMRIA<sup>®</sup>. Next, the applicant removed 50 percent of the chemotherapy pharmacy charges that would not be required for patients that may be eligible to receive treatment using KYMRIA<sup>®</sup>. The applicant standardized the charges and then applied an inflation factor of 1.09357, which is the 2-year inflation factor in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527), to update the charges from FY 2016 to

FY 2018. The applicant did not add charges for KYMRIAH to its analysis. However, the applicant provided a cost analysis related to the three categories of claims data it previously researched (that is, potential DLBCL cases, potential DLBCL cases with chemotherapy, and potential DLBCL cases without chemotherapy). The applicant's analysis showed the inflated average case-weighted standardized charge per case for potential DLBCL cases, potential DLBCL cases with chemotherapy, and potential DLBCL cases without chemotherapy was \$63,271, \$39,723, and \$72,781, respectively. The average case-weighted threshold amount for potential DLBCL cases, potential DLBCL cases with chemotherapy, and potential DLBCL cases without chemotherapy was \$58,278, \$48,190, and \$62,355 respectively. While the inflated average case-weighted standardized charge per case (\$39,723) is lower than the average case-weighted threshold amount (\$48,190) for potential DLBCL cases with chemotherapy, the applicant expected the cost of KYMRIAH to be higher than the new technology add-on payment threshold amount for all three cohorts. Therefore, the applicant maintained that it met the cost criterion.

We noted in the proposed rule that, as discussed in section II.F.2.d. of the preamble of the proposed rule, we proposed to assign the ICD-10-PCS procedure codes that describe procedures involving the utilization of these CAR T-cell therapy drugs and cases representing patients receiving treatment involving CAR T-cell therapy procedures to Pre-MDC MS-DRG 016 for FY 2019. Therefore, in addition to the analysis above, we compared the inflated average case-weighted standardized charge per case from all three cohorts above to the average case-weighted threshold amount for MS-DRG 016. The

average case-weighted threshold amount for MS-DRG 016 from Table 10 in the FY 2018 IPPS/LTCH PPS final rule is \$161,058. Although the inflated average case-weighted standardized charge per case for all three cohorts (\$63,271, \$39,723, and \$72,781) is lower than the average case-weighted threshold amount for MS-DRG 016, we noted that similar to above, the applicant expected the cost of KYMRIA to be higher than the new technology add-on payment threshold amount for MS-DRG 016. Therefore, it appeared that KYMRIA would meet the cost criterion under this scenario as well.

We stated in the proposed rule that we appreciated the applicant's analysis. However, we noted that the applicant did not provide information regarding which specific historic charges were removed in conducting its cost analysis. Nonetheless, we stated that we believed that even if historic charges were identified and removed, the applicant would meet the cost criterion because, as indicated, the applicant expected the cost of KYMRIA to be higher than the new technology add-on payment threshold amounts listed earlier.

We invited public comments on whether KYMRIA meets the cost criterion.

Comment: Commenters agreed with CMS that KYMRIA meets the cost criterion for new technology add-on payments based on the analysis above. The commenters noted that more recent information indicates that the cost of the drug alone is more than twice the estimated new technology add-on payment MS-DRG threshold amount.

Response: We appreciate the commenters' input and note that, since the publication of the proposed rule, CMS has received supplemental information that the cost for each administration of KYMRIAH is \$373,000.

After consideration of the public comments we received, we agree that KYMRIAH meets the cost criterion.

With regard to the cost criterion in reference to YESCARTA, the applicant conducted the following analysis. The applicant examined FY 2016 MedPAR claims data restricted to patients discharged in FY 2016. The applicant included potential cases reporting an ICD-10 diagnosis code of C83.38. Noting that only MS-DRGs 820 (Lymphoma and Leukemia with Major O.R. Procedure with MCC), 821 (Lymphoma and Leukemia with Major O.R. Procedure with CC), 823 and 824 (Lymphoma and Non-Acute Leukemia with Other O.R. Procedure with MCC, with CC, respectively), 825 (Lymphoma and Non Acute Leukemia with Other O.R Procedure without CC/MCC), and 840, 841 and 842 (Lymphoma and Non-Acute Leukemia with MCC, with CC and without CC/MCC, respectively) consisted of 10 or more cases, the applicant limited its analysis to these 8 MS-DRGs. The applicant identified 827 potential cases across these MS-DRGs. The average case-weighted unstandardized charge per case was \$126,978. The applicant standardized charges using FY 2016 standardization factors and applied an inflation factor of 1.09357 from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527). The applicant for YESCARTA did not include the cost of its technology in its analysis.

Included in the average case-weighted standardized charge per case were charges for the current treatment components. Therefore, the applicant for YESCARTA removed

20 percent of radiology charges to account for chemotherapy, and calculated the adjusted average case-weighted standardized charge per case by subtracting these charges from the standardized charge per case. Based on the distribution of potential cases within the eight MS-DRGs, the applicant case-weighted the final inflated average case-weighted standardized charge per case. This resulted in an inflated average case-weighted standardized charge per case of \$118,575. Using the FY 2018 IPPS Table 10 thresholds, the average case-weighted threshold amount was \$72,858. Even without considering the cost of its technology, the applicant maintained that because the inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount, the technology met the cost criterion.

We noted in the proposed rule that, as discussed in section II.F.2.d. of the preamble of the proposed rule, we proposed to assign the ICD-10-PCS procedure codes that describe procedures involving the utilization of these CAR T-cell therapy drugs and cases representing patients receiving treatment involving CAR T-cell therapy procedures to Pre-MDC MS-DRG 016 for FY 2019. Therefore, in addition to the analysis above, we compared the inflated average case-weighted standardized charge per case (\$118,575) to the average case-weighted threshold amount for MS-DRG 016. The average case-weighted threshold amount for MS-DRG 016 from Table 10 in the FY 2018 IPPS/LTCH PPS final rule is \$161,058. Although the inflated average case-weighted standardized charge per case is lower than the average case-weighted threshold amount for MS-DRG 016, we noted that the applicant expected the cost of YESCARTA to be higher than the new technology add-on payment threshold amount for MS-DRG 016. Therefore,

we stated that it appeared that YESCARTA would meet the cost criterion under this scenario as well.

We invited public comments on whether YESCARTA technology meets the cost criterion.

Comment: Commenters agreed with CMS that YESCARTA meets the cost criterion for new technology add-on payments based on the analysis above. The commenters noted that more recent information indicates the cost of the drug alone is more than twice the estimated new technology add-on payment MS-DRG threshold amount.

Response: We appreciate the commenters' input and note that, since the publication of the proposed rule, CMS has received supplemental information that the cost for each administration of YESCARTA is \$373,000.

After consideration of the public comments we received, we agree that YESCARTA meets the cost criterion.

With regard to substantial clinical improvement for KYMRIA, the applicant asserted that several aspects of the treatment represent a substantial clinical improvement over existing technologies. The applicant believed that KYMRIA allows access for a treatment option for those patients who are unable to receive standard-of-care treatment. The applicant stated in its application that there are no currently FDA-approved treatment options for patients with r/r DLBCL who are ineligible for or who have failed ASCT. Additionally, the applicant maintained that KYMRIA significantly improves clinical outcomes, including ORR, CR, OS, and durability of response, and allows for a

manageable safety profile. The applicant asserted that, when compared to the historical control data (SCHOLAR-1) and the currently available treatment options, it is clear that KYMRIAHA significantly improves clinical outcomes for patients with r/r DLBCL who are not eligible for ASCT. The applicant conveyed that, given that the patient population has no other available treatment options and an expected very short lifespan without therapy, there are no randomized controlled trials of the use of KYMRIAHA in patients with r/r DLBCL and, therefore, efficacy assessments must be made in comparison to historical control data. The SCHOLAR-1 study is the most comprehensive evaluation of the outcome of patients with refractory DLBCL. SCHOLAR-1 includes patients from two large randomized controlled trials (Lymphoma Academic Research Organization-CORAL and Canadian Cancer Trials Group LY.12) and two clinical databases (MD Anderson Cancer Center and University of Iowa/Mayo Clinic Lymphoma Specialized Program of Research Excellence).<sup>35</sup>

The applicant for KYMRIAHA conveyed that the PARMA study established high-dose chemotherapy and ASCT as the standard treatment for patients with r/r DLBCL.<sup>36</sup> However, according to the applicant, many patients with r/r DLBCL are ineligible for ASCT because of medical frailty. Patients who are ineligible for ASCT because of medical frailty would also be adversely affected by high-dose chemotherapy regimens.<sup>37</sup>

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<sup>35</sup> Crump, M., Neelapu, S.S., Farooq, U., et al., "Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study," *Blood*, Published online: August 3, 2017, doi: 10.1182/blood-2017-03-769620.

<sup>36</sup> Philip, T., Guglielmi, C., Hagenbeek, A., et al., "Autologous bone marrow transplantation as compared with salvage chemotherapy in relapses of chemotherapy-sensitive non-Hodgkin's lymphoma," *N Engl J Med*, 1995, vol. 333(23), pp. 1540-1545.

<sup>37</sup> Friedberg, J.W., "Relapsed/refractory diffuse large B-cell lymphoma," *Hematology AM Soc Hematol Educ Program*, 2011, vol. (1), pp. 498-505.

Lowering the toxicity of chemotherapy regimens becomes the only treatment option, leaving patients with little potential for therapeutic outcomes. According to the applicant, the lack of efficacy of these aforementioned salvage regimens was demonstrated in nine studies evaluating combined chemotherapeutic regimens in patients who were either refractory to first-line or first salvage. Chemotherapy response rates ranged from 0 percent to 23 percent with OS less than 10 months in all studies.<sup>38</sup> For patients who do not respond to combined therapy regimens, the National Comprehensive Cancer Network (NCCN) offers only clinical trials or palliative care as therapeutic options.<sup>39</sup>

According to the applicant for KYMRIAH, the immunomodulatory agent Lenalidomide was only able to show an ORR of 30 percent, a CR rate of 8 percent, and a 4.6-month median duration of response.<sup>40</sup> M-tor inhibitors such as Everolimus and Temserolimus have been studied as single agents, or in combination with Rituximab, as have newer monoclonal antibodies Dacetuzumab, Ofatumomab and Obinutuzumab. However, none induced a CR rate higher than 20 percent or showed a median duration of response longer than 1 year.<sup>41</sup>

According to the applicant, although controversial, allogeneic stem cell transplantation (allo-SCT) has been proposed for patients who have been diagnosed with

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<sup>38</sup> Crump, M., Neelapu, S.S., Farooq, U., et al., "Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study," *Blood*, Published online: August 3, 2017, doi: 10.1182/blood-2017-03-769620.

<sup>39</sup> National Comprehensive Cancer Network, NCCN Clinical Practice Guidelines in Oncology (NCCN GuidelinesR), "B-cell lymphomas: diffuse large b-cell lymphoma and follicular lymphoma (Version 3.2017)," May 25, 2017. Available at: [https://www.nccn.org/professionals/physician\\_gls/pdf/b-cell\\_blocks.pdf](https://www.nccn.org/professionals/physician_gls/pdf/b-cell_blocks.pdf).

<sup>40</sup> Klyuchnikov, E., Bacher, U., Kroll, T., et al., "Allogeneic hematopoietic cell transplantation for diffuse large B cell lymphoma: who, when and how?," *Bone Marrow Transplant*, 2014, vol. 49(1), pp. 1-7.

<sup>41</sup> Ibid.

r/r disease. It is hypothesized that the malignant cell will be less able to escape the immune targeting of allogenic T-cells – known as the graft-vs-lymphoma effect.<sup>42,43</sup> The use of allo-SCT is limited in patients who are not eligible for ASCT because of the high rate of morbidity and mortality. This medically frail population is generally excluded from participation. The population most impacted by this is the elderly, who are often excluded based on age alone. In seven studies evaluating allo-SCT in patients with r/r DLBCL, the median age at transplant was 43 years old to 52 years old, considerably lower than the median age of patients with DLBCL of 64 years old. Only two studies included any patients over 66 years old. In these studies, allo-SCT provided OS rates ranging from 18 percent to 52 percent at 3 to 5 years, but was accompanied by treatment-related mortality rates ranging from 23 percent to 56 percent.<sup>44</sup> According to the applicant, this toxicity and efficacy profile of allo-SCT substantially limits its use, especially in patients 65 years old and older. Given the high unmet medical need, the applicant maintained that KYMRIAHA represents a substantial clinical improvement by offering a treatment option for a patient population unresponsive to, or ineligible for, currently available treatments.

To express how KYMRIAHA has improved clinical outcomes, including ORR, CR rate, OS, and durability of response, the applicant referenced clinical trials in which KYMRIAHA was tested. Study 1 was a single-arm, open-label, multi-site, global Phase II

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<sup>42</sup> Ibid.

<sup>43</sup> Maude, S.L., Teachey, D.T., Porter, D.L., Grupp, S.A., “CD19-targeted chimeric antigen receptor T-cell therapy for acute lymphoblastic leukemia,” *Blood*, 2015, vol. 125(26), pp. 4017-4023.

<sup>44</sup> Klyuchnikov, E., Bacher, U., Kroll, T., et al., “Allogeneic hematopoietic cell transplantation for diffuse large B cell lymphoma: who, when and how?,” *Bone Marrow Transplant*, 2014, vol. 49(1), pp. 1-7.

study to determine the safety and efficacy of tisagenlecleucel in patients with R/R DLBCL (CCTL019C2201/CT02445248/‘JULIET’ study).<sup>45,46,47</sup> Key inclusion criteria included patients who were 18 years old and older, patients with refractory to at least two lines of chemotherapy and either relapsed post ASCT or who were ineligible for ASCT, measurable disease at the time of infusion, and adequate organ and bone marrow function. The study was conducted in three phases. In the screening phase patient eligibility was assessed and patient cells collected for product manufacture. Patients were also able to receive bridging, cytotoxic chemotherapy during this time. In the pre-treatment phase patients underwent a restaging of disease followed by lymphodepleting chemotherapy with fludarabine 25mg/m<sup>2</sup> x 3 and cyclophosphamide 250mg/m<sup>2</sup>/d x3 or bendamustine 90mg/m<sup>2</sup>/d x2 days. The treatment and follow-up phase began 2 to 14 days after lymphodepleting chemotherapy, when the patient received a single infusion of tisagenlecleucel with a target dose of 5x10<sup>8</sup> CTL019 transduced viable cells. The primary objective was to assess the efficacy of tisagenlecleucel, as measured by the best overall response (BOR), which was defined as CR or partial response (PR). It was assessed on the Chesson 2007 response criteria amended by Novartis Pharmaceutical Corporation as confirmed by an Independent Review Committee (IRC). One hundred forty-seven patients were enrolled, and 99 of them were infused with tisagenlecleucel.

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<sup>45</sup> Data on file, Oncology clinical trial protocol CCTL019C2201: “A Phase II, single-arm, multi-center trial to determine the efficacy and safety of CTL019 in adult patients with relapsed or refractory diffuse large Bcell lymphoma (DLBCL).” Novartis Pharmaceutical Corp, 2015.

<sup>46</sup> Schuster, S.J., Bishop, M.R., Tam, C., et al., “Global trial of the efficacy and safety of CTL019 in adult patients with relapsed or refractory diffuse large B-cell lymphoma: an interim analysis,” Presented at: 22<sup>nd</sup> Congress of the European Hematology Association, June 22-25, 2017, Madrid, Spain.

<sup>47</sup> ClinicalTrials.gov, “Study of efficacy and safety of CTL019 in adult DLBCL patients (JULIET).” Available at: <https://clinicaltrials.gov/ct2/show/NCT02445248>.

Forty-three patients discontinued prior to infusion (9 due to inability to manufacture and 34 due to patient-related issues).<sup>48</sup> The median age of treated patients was 56 years old with a range of 24 to 75; 20 percent were older than 65 years old. Patients had received 2 to 7 prior lines of therapy, with 60 percent receiving 3 or more therapies, and 51 percent having previously undergone ASCT. A primary analysis was performed on 81 patients infused and followed for more than or at least 3 months. In this primary analysis, the BOR was 53 percent; the study met its primary objective based on statistical analysis (that is, testing whether BOR was greater than 20 percent, a clinically relevant threshold chosen based on the response to chemotherapy in a patient with r/r DLBCL). Forty-three percent (43 percent) of evaluated patients reached a CR, and 14 percent reached a PR. ORR evaluated at 3 months was 38 percent with a distribution of 32 percent CR and 6 percent PR. All patients in CR at 3 months continued to be in CR. ORR was similar across subgroups including 64.7 percent response in patients who were older than 65 years old, 61.1 percent response in patients with Grade III/IV disease at the time of enrollment, 58.3 percent response in patients with Activated B-cell, 52.4 percent response in patients with Germinal Center B-cell subtype, and 60 percent response in patients with double and triple hit lymphoma. Durability of response was assessed based on relapse free survival (RFS), which was estimated at 74 percent at 6 months.

The applicant for KYMRIA<sup>®</sup> reported that Study 2 was a supportive Phase IIa single institution study of adults who were diagnosed with advanced CD19+ NHL

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<sup>48</sup> Schuster, S.J., Bishop, M.R., Tam, C., et al., "Global trial of the efficacy and safety of CTL019 in adult patients with relapsed or refractory diffuse large B-cell lymphoma: an interim analysis," Presented at: 22<sup>nd</sup> Congress of the European Hematology Association, June 22-25, 2017, Madrid, Spain.

conducted at the University of Pennsylvania.<sup>49,50</sup> Tisagenlecleucel cells were produced at the University of Pennsylvania using the same genetic construct and a similar manufacturing technique as employed in Study 1. Key inclusion criteria included patients who were at least 18 years old, patients with CD19+lymphoma with no available curative options, and measurable disease at the time of enrollment. Tisagenlecleucel was delivered in a single infusion 1 to 4 days after restaging and lymphodepleting chemotherapy. The median tisagenlecleucel cell dose was  $5.0 \times 10^8$  transduced cells. The study enrolled 38 patients; of these, 21 were diagnosed with DLBCL and 13 received treatment involving KYMRIA. Patients ranged in age from 25 to 77 years old, and had a median of 4 prior therapies. Thirty-seven percent had undergone ASCT and 63 percent were diagnosed with Grade III/IV disease. ORR at 3 months was 54 percent. Progression free survival was 43 percent at a median follow-up of 11.7 months. Safety and efficacy results are similar to those of the multi-center study.

The applicant for KYMRIA reported that Study 3 was a supportive, patient-level meta-analysis of historical outcomes in patients who were diagnosed with refractory DLBCL (SCHOLAR-1).<sup>51</sup> This study included a pooled data analysis of two Phase III clinical trials (Lymphoma Academic Research Organization-CORAL and

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<sup>49</sup> ClinicalTrials.gov, "Phase IIa study of redirected autologous T-cells engineered to contain anti-CD19 attached to TCRz and 4-signaling domains in patients with chemotherapy relapsed or refractory CD19+ lymphomas," Available at: <https://clinicaltrials.gov/ct2/show/NCT02030834>.

<sup>50</sup> Schuster, S.J., Svoboda, J., Nasta, S.D., et al., "Sustained remissions following chimeric antigen receptor modified T-cells directed against CD-19 (CTL019) in patients with relapsed or refractory CD19+ lymphomas," Presented at: 57th Annual Meeting of the American Society of Hematology, December 6, 2015, Orlando, FL.

<sup>51</sup> Crump, M., Neelapu, S.S., Farooq, U., et al., "Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study," *Blood*, Published online: August 3, 2017, doi: 10.1182/blood-2017-03-769620.

Canadian Cancer Trials Group LY.12) and two observational cohorts (MD Anderson Cancer Center and University of Iowa/Mayo Clinic Lymphoma Specialized Program of Research Excellence). Refractory disease was defined as progressive disease or stable disease as best response to chemotherapy (received more than or at least 4 cycles of first-line therapy or 2 cycles of later-line therapy, respectively) or relapse in less than or at 12 months post-ASCT. Of 861 abstracted records, 636 were included based on these criteria. All patients from each data source who met criteria for diagnosis of refractory DLBCL, including TFL and PMBCL, who went on to receive subsequent therapy were considered for analysis. Patients who were diagnosed with TFL and PMBCL were included because they are histologically similar and clinically treated as large cell lymphoma. Response rates were similar across the 4 datasets, ranging from 20 percent to 31 percent, with a pooled response rate of 26 percent. CR rates ranged from 2 percent to 15 percent, with a pooled CR rate of 7 percent. Subgroup analyses including patients with primary refractory, refractory to second or later-line therapy, and relapse in less than 12 months post-ASCT revealed response rates similar to the pooled analysis, with worst outcomes in the primary refractory group (20 percent). OS from the commencement of therapy was 6.3 months and was similar across subgroup analyses. Achieving a CR after last salvage chemotherapy predicted a longer OS of 14.9 months compared to 4.6 months in nonresponders. Patients who had not undergone ASCT had an OS of 5.1 months with a 2 year OS rate of 11 percent.

The applicant asserted that KYMRIA provides a manageable safety profile when treatment is performed by trained medical personnel and, as opposed to ASCT,

KYMRIAH mitigates the need for high-dose chemotherapy to induce response prior to infusion. Adverse events were most common in the 8 weeks following infusion and were manageable by a trained staff. Cytokine Release Syndrome (CRS) occurred in 58 percent of patients with 23 percent having Grade III or IV events as graded on the University of Pennsylvania grading system.<sup>52,53</sup> Median time to onset of CRS was 3 days and median duration was 7 days with a range of 2 to 30 days. Twenty-four percent of the patients required ICU admission. CRS was managed with supportive care in most patients. However, 16 percent required anti-cytokine therapy including tocilizumab (15 percent) and corticosteroids (11 percent). Other adverse events of special interest include infection in 34 percent (20 percent Grade III or IV) of patients, cytopenias not resolved by day 28 in 36 percent (27 percent Grade III or IV) of patients, neurologic events in 21 percent (12 percent Grade III or IV) of patients, febrile neutropenia in 13 percent (13 percent Grade III or IV) of patients, and tumor lysis syndrome 1 percent (1 percent Grade III). No deaths were attributed to tisagenlecleucel including no fatal cases of CRS or neurologic events. No cerebral edema was observed.<sup>54</sup> Study 2 safety results were consistent to those of Study 1.<sup>55</sup>

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<sup>52</sup> ClinicalTrials.gov, “Phase IIa study of redirected autologous T-cells engineered to contain anti-CD19 attached to TCRz and 4-signaling domains in patients with chemotherapy relapsed or refractory CD19+ lymphomas.” Available at: <https://clinicaltrials.gov/ct2/show/NCT02030834>.

<sup>53</sup> Schuster, S.J., Svoboda, J., Nasta, S.D., et al., “Sustained remissions following chimeric antigen receptor modified T-cells directed against CD-19 (CTL019) in patients with relapsed or refractory CD19+ lymphomas.” Presented at: 57th Annual Meeting of the American Society of Hematology, December 6, 2015, Orlando, FL.

<sup>54</sup> Schuster, S.J., Bishop, M.R., Tam, C., et al., “Global trial of the efficacy and safety of CTL019 in adult patients with relapsed or refractory diffuse large B-cell lymphoma: an interim analysis,” Presented at: 22<sup>nd</sup> Congress of the European Hematology Association, June 22-25, 2017, Madrid, Spain.

<sup>55</sup> Ibid.

After reviewing the studies provided by the applicant, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20292), we stated that we were concerned the applicant included patients who were diagnosed with TFL and PMBCL in the SCHOLAR-1 data results for their comparison analysis, possibly skewing results. Furthermore, the discontinuation rate of the JULIET trial was high. Of 147 patients enrolled for infusion involving KYMRIAH, 43 discontinued prior to infusion (9 discontinued due to inability to manufacture, and 34 discontinued due to patient-related issues). Finally, the rate of patients who experienced a diagnosis of CRS was high, 58 percent.<sup>56</sup>

The applicant for YESCARTA stated that YESCARTA represents a substantial clinical improvement over existing technologies when used in the treatment of patients with aggressive B-cell NHL. The applicant asserted that YESCARTA can benefit the patient population with the highest unmet need, patients with r/r disease after failure of first-line or second-line therapy, and patients who have failed or who are ineligible for ASCT. These patients, otherwise, have adverse outcomes as demonstrated by historical control data.

Regarding clinical data for YESCARTA, the applicant stated that historical control data was the only ethical and feasible comparison information for these patients with chemorefractory, aggressive NHL who have no other available treatment options and who are expected to have a very short lifespan without therapy. According to the applicant, based on meta-analysis of outcomes in patients with chemorefractory DLBCL,

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<sup>56</sup> Schuster, S.J., Bishop, M.R., Tam, C., et al., "Global trial of the efficacy and safety of CTL019 in adult patients with relapsed or refractory diffuse large B-cell lymphoma: an interim analysis," Presented at: 22<sup>nd</sup> Congress of the European Hematology Association, June 22-25, 2017, Madrid, Spain.

there are no curative options for patients with aggressive B-cell NHL, regardless of refractory subgroup, line of therapy, and disease stage with their median OS being 6.6 months.<sup>57</sup>

In the applicant's FY 2018 new technology add-on payment application for the KTE-C19 technology, which was discussed in the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19889), the applicant cited ongoing clinical trials. The applicant provided updated data related to these ongoing clinical trials as part of its FY 2019 application for YESCARTA.<sup>58,59,60</sup> The updated analysis of the pivotal Study 1 (ZUMA-1, KTE-C19-101), Phase I and II occurred when patients had been followed for 12 months after infusion of YESCARTA. Study 1 is a Phase I-II multi-center, open-label study evaluating the safety and efficacy of the use of YESCARTA in patients with aggressive refractory NHL. The trial consists of two distinct phases designed as Phase I (n=7) and Phase II (n=101). Phase II is a multi-cohort open-label study evaluating the efficacy of YESCARTA.<sup>61</sup> The applicant noted that, as of the analysis cutoff date for the interim analysis, the results of Study 1 demonstrated rapid and substantial improvement in

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<sup>57</sup> Seshardi, T., et al., "Salvage therapy for relapsed/refractory diffuse large B-cell lymphoma," *Biol Blood Marrow Transplant*, 2008 Mar, vol. 14(3), pp. 259-67

<sup>58</sup> Locke, F.L., et al., "Ongoing complete remissions in Phase 1 of ZUMA-1: a phase I-II multicenter study evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL)," Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>59</sup> Locke, F.L., et al., "Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretreleucel (axi-cel; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL)," Oral presentation, American Association of Cancer Research (AACR).

<sup>60</sup> Locke, F.L., et al., "Phase I results of ZUMA-1: a multicenter study of KTE-C19 anti-CD19 CAR T cell therapy in refractory aggressive lymphoma," *Mol Ther*, vol. 25, No 1, January 2017.

<sup>61</sup> Neelapu, S.S., Locke, F.L., et al., 2016, "KTE-C19 (anti-CD19 CAR T cells) induces complete remissions in patients with refractory diffuse large B-cell lymphoma (DLBCL): results from the pivotal Phase II ZUMA-1," Abstract presented at American Society of Hematology (ASH) 58th Annual Meeting, December 2016.

objective, or ORR. After 6 and 12 months, the ORR was 82 and 83 percent, respectively. Consistent response rates were observed in both Study 1, Cohort 1 (DLBCL; n=77) and Cohort 2 (PMBCL or TFL; n=24) and across covariates including disease stage, age, IPI scores, CD-19 status, and refractory disease subset. In the updated analysis, results were consistent across age groups. In this analysis, 39 percent of patients younger than 65 years old were in ongoing response, and 50 percent of patients at least 65 years old or older were in ongoing response. Similarly, the survival rate at 12 months was 57 percent among patients younger than 65 years old and 71 percent among patients at least 65 years old or older versus historical control of 26 percent. The applicant further stated that evidence of substantial clinical improvement regarding the efficacy of YESCARTA for the treatment of patients with chemorefractory, aggressive B-cell NHL is supported by the CR of YESCARTA in Study 1, Phase II (54 percent) versus the historical control (7 percent).<sup>62,63,64,65</sup> The applicant noted that CR rates were observed in both Study 1, Cohort 1. The applicant reported that, in the updated analysis, results were in ongoing response (46 percent of patients at least 65 years old or older were in ongoing response). Similarly, the survival rate at 12 months was 57 percent among patients younger than 65

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<sup>62</sup> Locke, F.L., et al., "Ongoing complete remissions in Phase I of ZUMA-1: a phase I-II multicenter study evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL)," Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>63</sup> Locke, F.L., et al., "Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretroleucel (axicel; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL)," Oral presentation, American Association of Cancer Research (AACR).

<sup>64</sup> Locke, F.L., et al., "Phase I results of ZUMA-1: a multicenter study of KTE-C19 anti-CD19 CAR T cell therapy in refractory aggressive lymphoma," *Mol Ther*, vol. 25, No 1, January 2017.

<sup>65</sup> Crump, et al., 2017, "Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study," *Blood*, vol. 0, 2017, pp. blood-2017-03-769620v1.

years old and 71 percent among patients at least 65 years old or older.<sup>66,67,68,69</sup> The applicant also provided the following tables to depict data to support substantial clinical improvement (we refer readers to the two tables below).

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<sup>66</sup> Locke, F.L., et al., “Ongoing complete remissions in Phase I of ZUMA-1: a phase I-II multicenter study evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL),” Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>67</sup> Locke, F.L., et al., “Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretreleucel (axicel; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL),” Oral presentation, American Association of Cancer Research (AACR).

<sup>68</sup> Locke, F.L., et al., “Phase I results of ZUMA-1: a multicenter study of KTE-C19 anti-CD19 CAR T cell therapy in refractory aggressive lymphoma,” *Mol Ther*, vol. 25, No 1, January 2017.

<sup>69</sup> Crump, et al., “Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study,” *Blood*, vol. 0, 2017, pp. blood-2017-03-769620v1.

**Overall Response Rates Across All YESCARTA Studies vs. SCHOLAR-1**

	<b>Study 1, Phase I n=7</b>	<b>Study 1, Phase II n=101</b>	<b>Scholar-1 n=529</b>
Overall Response Rate (%)	71	83	26
Month 6 (%)	43	41	
Ongoing with >15 Months of follow-up (%)	43	42	
Ongoing with >18 Months of follow-up (%)	43	Follow-up ongoing	

**Results for YESCARTA Study 1, Phase II: Complete Response**

	<b>Study 1, Phase II n=101</b>
Complete Response (%) (95 Percent Confidence Interval)	54 (44,64)
Duration of Response, median (range in months)	not reached
Ongoing Responses, CR (%) Median 8.7 months follow-up; median overall survival has not been reached	39
Ongoing Responses, CR (%) Median 15.3 months follow-up; median overall survival has not been reached	40

According to the applicant, the 6-month and 12-month survival rates (95 percent CI) for patients enrolled in the SCHOLAR-1 study were 53 percent (49 percent, 57 percent) and 28 percent (25 percent, 32 percent).<sup>70</sup> In contrast, the 6-month and 12-month survival rates (95 percent CI) in the Study 1 updated analysis were 79 percent (70 percent, 86 percent) and 60 percent (50 percent, 69 percent).<sup>71,72,73</sup>

<sup>70</sup> Crump, et al., “Outcomes in refractory diffuse large B-cell lymphoma: results from the international SCHOLAR-1 study,” *Blood*, vol. 0, 2017, pp. blood-2017-03-769620v1.

<sup>71</sup> Locke, F.L., et al., “Ongoing complete remissions in Phase I of ZUMA-1: a phase I-II multicenter study evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL),” Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>72</sup> Locke, F.L., et al., “Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretroleucel (axi-cel; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL),” Oral presentation, American Association of Cancer Research (AACR).

<sup>73</sup> Locke, F.L., et al., “Phase I results of ZUMA-1: a multicenter study of KTE-C19 anti-CD19 CAR T cell therapy in refractory aggressive lymphoma,” *Mol Ther*, vol. 25, No 1, January 2017.

The applicant also cited safety results from the pivotal Study 1, Phase II. According to the applicant, the clinical trial protocol stipulated that patients were infused with YESCARTA in the hospital inpatient setting and were monitored in the inpatient setting for at least 7 days for early identification and treatment involving YESCARTA-related toxicities, which primarily included CRS diagnoses and neurotoxicities. The applicant noted that the interim analysis showed the length of stay following infusion of YESCARTA was a median of 15 days. Ninety-three percent of patients experienced CRS diagnoses, 13 percent of whom experienced Grade III or higher (severe, life threatening or fatal) CRS diagnoses. The median time to onset of CRS diagnosis was 2 days (range 1 to 12 days) and the median time to resolution was 8 days. Ninety-eight percent of patients recovered from CRS diagnosis. Neurologic events occurred in 64 percent of patients, 28 percent of whom experienced Grade III or higher (severe or life threatening) events. The median time to onset of neurologic events was 5 days (range 1 to 17 days). The median time to resolution was 17 days. Nearly all patients recovered from neurologic events. The medications most often used to treat these complications included growth factors, blood products, anti-infectives, steroids, tocilizumab, and vasopressors. Two patients died from YESCARTA-related adverse events (hemophagocytic lymphohistiocytosis and cardiac arrest in the hospital setting as a result of CRS diagnoses). According to the applicant, there were no clinically important differences in adverse event rates across age groups (younger than 65 years old; 65 years old or older), including CRS diagnoses and neurotoxicity.<sup>74,75</sup>

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<sup>74</sup> Locke, F.L., et al., "Ongoing complete remissions in Phase I of ZUMA-1: a phase I-II multicenter study

The applicant for YESCARTA provided information regarding a safety expansion cohort, Study 1 Phase II Safety Expansion Cohort 3 that was created and carried out in 2017. According to the applicant, this Safety Expansion Cohort investigated measures to mitigate the incidence and/or severity of anti-CD-19 CAR T therapy and evaluated an adverse event mitigation strategy by prophylactically using levetiracetam (Keppra), an anticonvulsant, and tocilizumab, an IL-6 receptor inhibitor. Of the 30 patients treated, 2 patients experienced Grade III CRS diagnoses; 1 of the 2 patients recovered. In late April 2017, the other patient also experienced multi-organ failure and a neurologic event that subsequently progressed to a fatal Grade V cerebral edema that was deemed related to YESCARTA treatment. This case of cerebral edema was observed in a 21 year-old male with refractory, rapidly progressive, symptomatic, stage IVB PMBCL. Analysis of the baseline serum and cerebrospinal fluid (CSF) obtained prior to any study treatment demonstrated high cytokine and chemokine levels. According to the applicant, this suggests a significant preexisting underlying inflammatory process, both systemically and within the central nervous system. Rapidly progressing disease, recent mediastinal XRT (external beam radiation therapy) and/or CMV (cytomegalovirus) reactivation may have contributed to the pre-existing state. There were no prior cases of cerebral edema in the 200 patients who have been treated with YESCARTA in the ZUMA clinical development

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evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL),” Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>75</sup> Locke, F.L., et al., “Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretroleucel (axi-cel; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL),” Oral presentation, American Association of Cancer Research (AACR).

program. The single patient event from the Study 1 Phase II Safety Expansion Cohort 3 was the first Grade V cerebral edema event.<sup>76,77</sup>

After reviewing the information submitted by the applicant as part of its FY 2019 new technology add-on payment application for YESCARTA, we stated in the FY 2019 IPPS/LTCH PPS proposed rule that we were concerned that it does not appear to include patient mortality data that was included as part of the applicant's FY2018 new technology add-on payment application for the KTE-C19 technology. In that application, as discussed in the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19890), the applicant provided that by an earlier cutoff date for the interim analysis of Study 1, among all KTE-C19 treated patients, 12 patients in Study 1, Phase II, including 10 from Cohort 1, and 2 from Cohort 2, died. Eight of these deaths were due to disease progression. One patient had disease progression after receiving KTE-C19 treatment and subsequently had ASCT. After ASCT, the patient died due to sepsis. Two patients (3 percent) died due to KTE-C19-related adverse events (Grade V hemophagocytic lymphohistiocytosis event and Grade V anoxic brain injury), and one died due to an adverse event deemed unrelated to treatment involving KTE-C19 (Grade V pulmonary embolism), without disease progression. We believed it would be relevant to include this information because it is related to the same treatment that is the subject of the applicant's FY 2019 new technology add-on payment application.

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<sup>76</sup> Locke, F.L., et al., "Ongoing complete remissions in Phase I of ZUMA-1: a phase I-II multicenter study evaluating the safety and efficacy of KTE-C19 (anti-CD19 CAR T cells) in patients with refractory aggressive B-cell non-Hodgkin lymphoma (NHL)," Oral presentation (abstract 10480) presented at European Society for Medical Oncology (ESMO), October 2016.

<sup>77</sup> Locke, F.L., et al., "Primary results from ZUMA-1: a pivotal trial of axicabtagene ciloretroleucel (acicecl; KTE-C19) in patients with refractory aggressive non-Hodgkins lymphoma (NHL)," Oral presentation, American Association of Cancer Research (AACR).

We also stated that we were concerned that there are few published results showing any survival benefits from the use of this treatment. In addition, we were concerned with the limited number of patients (n=108) that were studied after infusion involving YESCARTA T-cell immunotherapy. Finally, we indicated that we were concerned about the data related to the percentage of patients who experienced complications or toxicities related to YESCARTA treatment. According to the applicant, of the patients who participated in YESCARTA clinical trials, 93 percent developed CRS diagnoses and 64 percent experienced neurological adverse events.

We invited public comments on whether KYMRIAH and YESCARTA meet the substantial clinical improvement criterion.

The applicants for KYMRIAH and YESCARTA, as well as others submitted comments regarding whether KYMRIAH and YESCARTA met the substantial clinical improvement criterion.

Comment: The applicant for KYMRIAH responded to CMS' concerns presented in the proposed rule regarding the JULIET trial and provided updated trial results. According to the applicant, of the 160 patients enrolled in the JULIET trial, 106 patients received treatment involving tisagenlecleucel, including 92 patients who received the product manufactured in the U.S. and were followed for at least 3 months or discontinued earlier. The applicant stated that 11 out of 160 patients (7 percent) enrolled did not receive treatment involving tisagenlecleucel due to manufacturing failure and 38 other patients did not receive treatment involving tisagenlecleucel due to patient-related issues.

In response to CMS' concerns that the use of the SCHOLAR-1 study as a baseline for comparison to the JULIET trial may have skewed results because the baseline population of the SCHOLAR-1 study included patient populations diagnosed with TFL and PMBCL, the applicant for KYMRIAHA stated that the JULIET trial included patients diagnosed with TFL, making this patient population similar in nature to what was included in the SCHOLAR study. The applicant also indicated that, although it is true that patients diagnosed with PMBCL were excluded from the JULIET trial, these patients only make up 2 percent of the total population of the 636 patients evaluated in the SCHOLAR-1 study; limiting the impact that these patients could have had on the observed response rates. The applicant further explained that PMBCL is a form of large cell lymphoma, which differs from DLBCL in that the patient population is often younger and healthier and patients diagnosed with PMBCL are more likely to respond to first-line therapy, therefore, relapsed and refractory (r/r) patients are rare compared to those diagnosed with DLBCL. The applicant also stated that, due to the infrequency of patients diagnosed with r/r PMBCL, research isolating this pathology for treatment effect is limited. The applicant indicated that, although some studies estimate that chemorefractory PMBCL has a lower response rate than refractory DLBCL, those studies still report ORR equivalent to what was shown in SCHOLAR and each of these studies' results show r/r PMBCL patients having a CR rate that is equivalent or better than what was observed in the larger SCHOLAR study. The applicant believed that, given these outcomes and the small number of patients diagnosed with PMBCL in the SCHOLAR

literature, it is unlikely that the results are skewed in such a way as to overestimate the comparative efficacy of KYMRIA<sup>®</sup> for patients diagnosed with r/r DLBCL.

In response to CMS' concerns regarding the drop-out rate within the JULIET trial, the applicant for KYMRIA<sup>®</sup> stated that the JULIET trial was designed to reflect a paradigm of patient management that the applicant believes reflects the real-world treatment decisions of health care providers. The applicant explained that in the JULIET trial, any patient who was identified as a candidate for treatment involving KYMRIA<sup>®</sup> and could undergo apheresis was enrolled in the trial at the time of apheresis collection, then patients were allowed to undergo bridging chemotherapy during the time that they awaited a manufacturing slot assignment and during the manufacturing process. The applicant indicated that this is in contrast with protocols of other trials in which patients are not enrolled until such time as a manufacturing slot is available because patients diagnosed with r/r DLBCL have rapidly progressive disease and they often have disease which is resistant or refractory to therapy and, therefore, patients may progress during this time. The applicant further stated that the design of the JULIET trial allowed these events to be captured, whereas other study designs that do not enroll patients until a manufacturing slot is available and assigned would not capture such events because such patients would never be enrolled in the study. The applicant explained that the median time from apheresis to infusion of 113 days is not a direct measure of manufacturing time and reflects the fact that cryopreserved apheresis allowed patients to be apheresed before trial enrollment. Additionally, the applicant stated that the point at which the patient is infused after manufacturing is at the discretion of the treating physician, based on what is

appropriate for the patient. The applicant explained that the use of cryopreserved apheresis material allows physicians to maximize the timing of apheresis for the benefit of patients and to minimize the effect of preceding chemotherapy on the health of the cells, which is not accounted for in a measurement of apheresis to infusion. The applicant further stated that the clinical trial was managed differently than their commercial process. The applicant indicated that, early in the JULIET trial, capacity-limited manufacturing could have led to longer wait times compared to their current commercial (non-trial) process, where patient cells are manufactured on a first-in, first manufactured basis and, their target is a 22-day manufacturing cycle from receipt of leukapheresis material, according to Novartis's requirements, to return shipping of KYMRIAH.

The applicant also responded to CMS' concern regarding the percentage of patients who experienced CRS in the JULIET trial. The applicant for KYMRIAH stated that updated results show, using the conservative University of Pennsylvania Scale, CRS occurred in 78 percent of the patients enrolled in the JULIET clinical trial. However, only 23 percent of the patients had  $\geq$  Grade III CRS and no patient had Grade V CRS. The applicant further stated that patients with low grade CRS may reflect symptoms such as fever, myalgia, nausea or fatigue. The applicant noted that, in this context, the patients with  $\geq$  Grade III CRS represent those with a life-threatening condition that requires interventions to support respiratory or circulatory function. The applicant indicated that CRS was manageable by a trained staff according to a specific CRS treatment algorithm and current standard-of-care for these patients includes high-dose salvage chemotherapy

regimens, as well as myeloablative therapy prior to autologous stem cell transplant, both of which have aggressive toxicity profiles. However, the applicant indicated that many of the toxicities of autologous stem cell transplant are managed without the benefit of treatment algorithms and directed therapies which aid in the management of CRS.

The applicant for YESCARTA responded to CMS' concern that its new technology add-on payment application did not appear to include patient mortality data that was included as part of the applicant's FY 2018 new technology add-on payment application for the KTE-C19 technology. The applicant acknowledged that the Study 1 interim analysis data included in the FY2018 new technology add-on payment application and depicted as CMS' concern was not explicitly detailed in the FY 2019 application, which focused on the primary analysis, nor in Supplement 2, which provided data from the updated analysis. The applicant confirmed that there were no new deaths from adverse events at the time of the Study 1 primary analysis (median follow-up of 6 months) or at the time of the updated analysis (median follow-up of 15.4 months).

The applicant also responded to CMS' concern that there are few published results describing survival benefits from the use of YESCARTA. The applicant indicated that information to address this issue was submitted to CMS in a new technology add-on payment supplemental file. The applicant indicated that this file provided data from the updated analysis (median follow-up of 15.4 months) and references for the published manuscripts. (We note that the information the applicant provided with its public comment was also previously provided to CMS in the supplemental file mentioned above). The applicant stated that, in December 2017, the long-term follow-up of Study 1

(ZUMA-1), Phase I (n=7), and Phase II (n=101) was published in the New England Journal of Medicine and presented at ASH 2017. The applicant explained that at median 15.4 months follow-up at the time of the updated analysis data cutoff (August 11, 2017), responses were ongoing in 42 percent of the patients where median duration of response for complete response has not been reached and median overall survival has not been reached. The applicant indicated that the authors concluded these high levels of durable response confirmed that YESCARTA is highly effective and provides substantial clinical benefit for patients diagnosed with large B-cell lymphoma who otherwise have no curative options. Additionally, the applicant stated that results show (best objective response, ongoing) ORR (82 percent, 42 percent) and CR (58 percent, 40 percent) at the time of the updated analysis (15.4 months) are significantly improved over results from SCHOLAR-1 historical control of 26 percent. The applicant stated that, based on the evidence of improved benefits provided to patients with no other treatment options, this study supports the finding that YESCARTA demonstrates that it represents a substantial clinical improvement over existing treatment options. The applicant further detailed that the results from the updated analysis show: the median time to response was rapid (1.0 month; range, 0.8 to 6.0) and that the median duration of complete response has not been reached. Additionally, the applicant explained that responses to treatment, including ongoing ones, were consistent across key covariates, including in individuals 65 years of age and younger and those individuals 65 years of age and older. The applicant also indicated that the median overall survival has not been reached. However, the applicant stated that the results of the updated analysis show the overall survival rate at 18 months

was 52 percent and 56 percent of patients enrolled in the study were alive at the time of the updated analysis. The applicant also indicated that results show ongoing durable remissions have been observed in patients at 24 months.

The applicant for YESCARTA also responded to CMS' concern regarding the limited number of patients (n=108) that were studied after infusion involving YESCARTA T-cell immunotherapy. The applicant stated that the statistical plan for Study 1 was developed by Kite in close discussion with FDA. The applicant explained that the design of this statistical plan was developed so that the study size would be powered to show statistical significance for the primary end point: ORR. The applicant indicated that the primary analysis of Study 1, Phase II demonstrates that the primary endpoint has been met and that key secondary endpoints including Duration of Response and Overall Survival were also met. Therefore, the applicant believed that the results of the clinical data show YESCARTA has demonstrated substantial clinical improvement for patients who previously had no curative options, no standard therapy and a short expected survival. The applicant also explained that the sample size (the number of patients planned) for Study 1 was determined by the number of patients required to statistically demonstrate an improvement in the response rate with treatment involving YESCARTA and is consistent with other single-arm oncology studies with a response rate endpoint. The applicant indicated that Study 1 had an adequate sample size to provide 90 percent power to statistically demonstrate an improvement in response rate relative to the historical control rate of 20 percent, and a historical control was the only ethical and feasible study design for these r/r large B-cell lymphoma patients who

previously had no other treatment options and have a uniformly very poor outcome without therapy. The applicant stated that standard protocols, when evaluating a therapy with a profound improvement in the endpoint, usually require a smaller sample size and larger studies are required when the improvement in the endpoint is small or difficult to demonstrate. The applicant believed that, given the magnitude of improved benefit from treatment with YESCARTA, the sample size of n=108 was adequate to demonstrate efficacy and the trial was adequately sized to demonstrate a positive risk-benefit consistent with Good Clinical Practice (GCP)<sup>17</sup> and International Conference on Harmonization (ICH) guidelines.

Response: We appreciate the applicants' submission of additional information to address the concerns presented in the proposed rule.

After consideration of the public comments we received, we agree that both, KYMRIAH and YESCARTA, represent a substantial clinical improvement over existing technologies because the technologies allow access for a treatment option for those patients who are unable to receive standard-of-care treatment. Additionally, there are no other currently FDA-approved treatment options for patients with r/r DLBCL who are ineligible for, or who have failed ASCT. Finally, both technologies appear to significantly improve clinical outcomes, including ORR, CR, OS, and durability of response, and allow for a manageable safety profile.

In summary, we have determined that KYMRIAH and YESCARTA meet all of the criteria for approval of new technology add-on payments. Therefore, we are approving new technology add-on payments for KYMRIAH and YESCARTA for

FY 2019. We expect that KYMRIAHA will be administered for the treatment of adult patients (18 years old and older) diagnosed with r/r DLBCL not eligible for ASCT, and YESCARTA will be administered for the treatment of adult patients diagnosed with r/r large B-cell lymphoma after two or more lines of systemic therapy, including DLBCL not otherwise specified, primary mediastinal large B-cell, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma. Cases involving KYMRIAHA and YESCARTA that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure codes XW033C3 and XW043C3. The applicants for both, KYMRIAHA and YESCARTA, estimate that the average cost for an administered dose of KYMRIAHA or YESCARTA is \$373,000. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of KYMRIAHA or YESCARTA is \$186,500 for FY 2019.

We note that on May 16, 2018, CMS opened a national coverage determination (NCD) analysis on CAR T-cell therapy for Medicare beneficiaries with advanced cancer. The expected national coverage analysis completion date is May 17, 2019. For more information, we refer reader to the CMS website at: <https://www.cms.gov/medicare-coverage-database/details/nca-tracking-sheet.aspx?NCAId=291>.

Lastly, we note that in the FY 2019 IPPS/LTCH proposed rule (83 FR 20294), we discussed possible payment alternatives and invited public comments regarding the most appropriate mechanism to provide payment to hospitals for new technologies such as

CAR T-cell therapy drugs, including through the use of new technology add-on payments. We also invited public comments on how they would affect incentives to encourage lower drug prices.

As discussed further in section II.F.2.d. of the preamble of this final rule, building on President Trump's *Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs*, the CMS Center for Medicare and Medicaid Innovation (Innovation Center) is soliciting public comment in the CY 2019 OPPS/ASC proposed rule on key design considerations for developing a potential model that would test private market strategies and introduce competition to improve quality of care for beneficiaries, while reducing both Medicare expenditures and beneficiaries' out-of-pocket spending. Given the relative newness of CAR T-cell therapy, the potential model, and our request for feedback on this model approach, we believe that it would be premature to adopt changes to our existing payment mechanisms, including structural changes in new technology add-on payments. Therefore, we disagree with commenters who have requested such changes under the IPPS for FY 2019.

b. VYXEOS™ (Cytarabine and Daunorubicin Liposome for Injection)

Jazz Pharmaceuticals, Inc. submitted an application for new technology add-on payments for the VYXEOS™ technology for FY 2019. (We note that Celator Pharmaceuticals, Inc. submitted an application for new technology add-on payments for VYXEOS™ for FY 2018. However, Celator Pharmaceuticals did not receive FDA approval by the July 1, 2017 deadline for applications for FY 2018.) VYXEOS™ was approved by FDA on August 3, 2017, for the treatment of adults with newly diagnosed

therapy-related acute myeloid leukemia (t-AML) or AML with myelodysplasia-related changes (AML-MRC).

AML is a type of cancer in which the bone marrow makes abnormal myeloblasts (immature bone marrow white blood cells), red blood cells, and platelets. If left untreated, AML progresses rapidly. Normally, the bone marrow makes blood stem cells that develop into mature blood cells over time. Stem cells have the potential to develop into many different cell types in the body. Stem cells can act as an internal repair system, dividing, essentially without limit, to replenish other cells. When a stem cell divides, each new cell has the potential to either remain a stem cell or become a specialized cell, such as a muscle cell, a red blood cell, or a brain cell, among others. A blood stem cell may become a myeloid stem cell or a lymphoid stem cell. Lymphoid stem cells become white blood cells. A myeloid stem cell becomes one of three types of mature blood cells: (1) red blood cells that carry oxygen and other substances to body tissues; (2) white blood cells that fight infection; or (3) platelets that form blood clots and help to control bleeding. In patients diagnosed with AML, the myeloid stem cells usually become a type of myeloblast. The myeloblasts in patients diagnosed with AML are abnormal and do not become healthy white blood cells. Sometimes in patients diagnosed with AML, too many stem cells become abnormal red blood cells or platelets. These abnormal cells are called leukemia cells or blasts.

AML is defined by the World Health Organization (WHO) as greater than 20 percent blasts in the bone marrow or blood. AML can also be diagnosed if the blasts are found to have a chromosome change that occurs only in a specific type of AML

diagnosis, even if the blast percentage does not reach 20 percent. Leukemia cells can build up in the bone marrow and blood, resulting in less room for healthy white blood cells, red blood cells, and platelets. When this occurs, infection, anemia, or increased risk for bleeding may result. Leukemia cells can spread outside the blood to other parts of the body, including the central nervous system (CNS), skin, and gums.

Treatment of AML diagnoses usually consists of two phases; remission induction and post-remission therapy. Phase one, remission induction, is aimed at eliminating as many myeloblasts as possible. The most common used remission induction regimens for AML diagnoses are the “7+3” regimens using an antineoplastic and an anthracycline. Cytarabine and daunorubicin are two commonly used drugs for “7+3” remission induction therapy. Cytarabine is continuously administered intravenously over the course of 7 days, while daunorubicin is intermittently administered intravenously for the first 3 days. The “7+3” regimen typically achieves a 70 to 80 percent complete remission (CR) rate in most patients under 60 years of age.

High rates of CR are not generally seen in older patients for a number of reasons, such as different leukemia biology, much higher incidence of adverse cytogenetic abnormalities, higher rate of multidrug resistant leukemic cells, and comparatively lower patient performance status (the standard criteria for measuring how the disease impacts a patient’s daily living abilities). Intensive induction therapy has worse outcomes in this patient population.<sup>78</sup> The applicant asserted that many older adults diagnosed with AML

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<sup>78</sup> Juliusson, G., Lazarevic, V., Horstedt, A.S., Hagberg, O., Hoglund, M., “Acute myeloid leukemia in the real world: why population-based registries are needed”, *Blood*, 2012 Apr 26; vol. 119(17), pp. 3890–9.

have a poor performance status<sup>79</sup> at presentation and multiple medical comorbidities that make the use of intensive induction therapy quite difficult or contraindicated altogether. Moreover, the CR rates of poor-risk patients diagnosed with AML are substantially higher in patients over 60 years of age; owing to a higher proportion of secondary AML, disease developing in the setting of a prior myeloid disorder, or prior cytotoxic chemotherapy. Therefore, less than half of older adults diagnosed with AML achieve CR with combination induction regimens.<sup>80</sup>

According to the applicant, the combination of cytarabine and an anthracycline, either as “7+3” regimens or as part of a different regimen incorporating other cytotoxic agents, may be used as so-called “salvage” induction therapy in the treatment of adults diagnosed with AML who experience relapse in an attempt to achieve CR. According to the applicant, while CR rates of success vary widely depending on underlying disease biology and host factors, there is a lower success rate overall in achievement of CR with “7 +3” regimens compared to VYXEOS™ therapy. According to the applicant, “7+3” regimens produce a CR rate of approximately 50 percent in younger adult patients who have relapsed, but were in CR for at least 1 year.<sup>81</sup>

VYXEOS™ is a nano-scale liposomal formulation containing a fixed combination of cytarabine and daunorubicin in a 5:1 molar ratio. This formulation was developed by the applicant using a proprietary system known as CombiPlex. According to the

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<sup>79</sup> Stone, R. M., et al., (2004), “Acute myeloid leukemia. Hematology”, Am Soc Hematol Educ Program, 2004, pp. 98-117.

<sup>80</sup> Appelbaum, F. R., Gundacker, H., Head, D. R., “Age and acute myeloid leukemia”, *Blood* 2006, vol. 107, pp. 3481-3485.

<sup>81</sup> Kantarjian, H., Rayandi, F., O’Brien, S., et al., “Intensive chemotherapy does not benefit most older patients (age 70 years and older) with acute myeloid leukemia,” *Blood*, 2010, vol. 116(22), pp. 4422.

applicant, CombiPlex addresses several fundamental shortcomings of conventional combination regimens, specifically the conventional “7+3” free drug dosing, as well as the challenges inherent in combination drug development, by identifying the most effective synergistic molar ratio of the drugs being combined *in vitro*, and fixing this ratio in a nano-scale drug delivery complex to maintain the optimized combination after administration and ensuring exposure of this ratio to the tumor.

Cytarabine and daunorubicin are co-encapsulated inside the VYXEOS™ liposome at a fixed ratiometrically, optimized 5:1 cytarabine:daunorubicin molar ratio. According to the applicant, encapsulation maintains the synergistic ratios, reduces degradation, and minimizes the impact of drug transporters and the effect of known resistant mechanisms. The applicant stated that the 5:1 molar ratio has been shown, *in vitro*, to maximize synergistic antitumor activity across multiple leukemic and solid tumor cell lines, including AML, and in animal model studies to be optimally efficacious compared to other cytarabine:daunorubicin ratios. In addition, the applicant stated that in clinical studies, the use of VYXEOS™ has demonstrated consistently more efficacious results than the conventional “7+3” free drug dosing. VYXEOS™ is intended for intravenous administration after reconstitution with 19 mL sterile water for injection. VYXEOS™ is administered as a 90-minute intravenous infusion on days 1, 3, and 5 (induction therapy), as compared to the “7+3” free drug dosing, which consists of two individual drugs administered on different days, including 7 days of continuous infusion.

With regard to the newness criterion, as discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar

to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant asserted that VYXEOS™ does not use the same or similar mechanism of action to achieve a therapeutic outcome as any other drug assigned to the same or a different MS-DRG. The applicant stated that no other AML treatment is designed, nor is able, to deliver a fixed, ratiometrically optimized and synergistic drug:drug ratio of 5:1 cytarabine to daunorubicin, and selectively target and accumulate at the site of malignancy, while minimizing unwanted exposure, which the applicant based on the data results of preclinical and clinical studies of the use of VYXEOS™. The applicant indicated that VYXEOS™ is a nano-scale liposomal formulation of a fixed combination of cytarabine and daunorubicin. Further, the applicant stated that the rationale for the development of VYXEOS™ is based on prolonged delivery of synergistic drug ratios utilizing the applicant’s proprietary, ratiometric CombiPlex technology. According to the applicant, conventional “7+3” free drug dosing has no delivery complex, and these individual drugs are administered without regard to their ratio dependent interaction. According to the applicant, enzymatic inactivation and imbalanced drug efflux and transporter expression reduce drug levels in the cell. Further, decreased cytotoxicity leads to cell survival, emergence of drug resistant cells, and decreased overall survival.

The applicant provided the results of clinical studies to demonstrate that the CombiPlex technology and the ratiometric dosing of VYXEOS™ represent a shift in

anticancer agent delivery, whereby the fixed, optimized dosing provides less drug to achieve improved efficacy, while maintaining a favorable risk-benefit profile. The results of this ratiometric dosing approach are in contrast to the typical combination chemotherapy development that establishes the recommended dose of one agent and then adds subsequent drugs to the combination at increasing concentrations until the aggregate effects of toxicity are considered to be limiting (the “7+3” drug regimen). According to the applicant, this current approach to combination chemotherapy development assumes that maximum therapeutic activity will be achieved with maximum dose intensity for all drugs in the combination, and ignores the possibility that more subtle concentration-dependent drug interactions could result in frankly synergistic outcomes.

The applicant maintained that, while VYXEOS<sup>™</sup> contains no novel active agents, its innovative drug delivery mechanism appears to be a superior way to deliver the two active compounds in an effort to optimize their efficacy in killing leukemic blasts. However, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20296), we stated that we were concerned it is possible that VYXEOS<sup>™</sup> may use a similar mechanism of action compared to currently available treatment options because both the current treatment regimen and VYXEOS<sup>™</sup> are used in the treatment of AML by intravenous administration of cytarabine and daunorubicin. We specifically stated that we were concerned that the mechanism of action of the ratiometrically fixed liposomal formulation of VYXEOS<sup>™</sup> is the same or similar to that of the current intravenous administration of cytarabine and daunorubicin.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, we stated that we believe that potential cases representing patients who may be eligible for treatment involving VYXEOS™ would be assigned to the same MS-DRGs as cases representing patients who receive treatment for diagnoses of AML.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant asserted that VYXEOS™ is indicated for use in the treatment of patients who have been diagnosed with high-risk AML. The applicant also asserted that VYXEOS™ is the first and only approved fixed combination of cytarabine and daunorubicin and is designed to uniquely control the exposure using a nano-scale drug delivery vehicle leading to statistically significant improvements in survival in patients who have been diagnosed with high-risk AML compared to the conventional “7+3” free drug dosing. We stated in the proposed rule that we believe that VYXEOS™ involves the treatment of the same patient population as other AML treatment therapies.

The following unique ICD-10-PCS codes were created to describe the administration of VYXEOS™: XW033B3 (Introduction of cytarabine and caunorubicin liposome antineoplastic into peripheral vein, percutaneous approach, new technology group 3) and XW043B3 (Introduction of cytarabine and daunorubicin liposome antineoplastic into central vein, percutaneous approach, new technology group 3).

In the FY 2019 IPPS/LTCH PPS proposed rule, we invited public comments on whether VYXEOS™ is substantially similar to existing technology, including whether the mechanism of action of VYXEOS™ differs from the mechanism of action of the currently

available treatment regimen. We also invited public comments on whether VYXEOS™ meets the newness criterion.

Comment: Several commenters supported the novel and effective ratiometric dosing drug delivery mechanism of VYXEOS™. The applicant stated that preclinical and clinical evidence confirms the differentiated mechanism of action of VYXEOS™ from other available treatment options. The applicant also reiterated that it believed VYXEOS™ is not substantially similar to any other currently available drug and is highly differentiated from the conventional “7+3” free drug dosing treatment regimen.

Response: We appreciate the commenters’ and the applicant’s input on whether VYXEOS™ meets the newness criterion. After consideration of the public comments we received, we believe that VYXEOS™ has a unique mechanism of action and, therefore, is not substantially similar to other drug therapies. We believe that the liposomal formulation used to combine daunorubicin and cytarabine to create VYXEOS™ is unique and distinct from other anti-cancer agents and, therefore, we believe that VYXEOS™ meets the newness criterion.

With regard to the cost criterion, the applicant conducted the following analysis. The applicant used the FY 2016 MedPAR Hospital Limited Data Set (LDS) to assess the MS-DRGs to which cases representing potential patient hospitalizations that may be eligible for treatment involving VYXEOS™ would most likely be assigned. These potential cases representing patients who may be VYXEOS™ candidates were identified if they: (1) were diagnosed with acute myeloid leukemia (AML); and (2) received chemotherapy during their hospital stay. The cohort was further limited by excluding

patients who had received bone marrow transplants. The cohort used in the analysis is referred to in this discussion as the primary cohort.

According to the applicant, the primary cohort of cases spans 131 unique MS-DRGs, 16 of which contained more than 10 cases. The most common MS-DRGs are MS-DRG 837, 834, 838, and 839. These 4 MS-DRGs account for 4,457 (81 percent) of the 5,483 potential cases in the cohort.

The case-weighted unstandardized charge per case is approximately \$185,844. The applicant then removed charges related to other chemotherapy agents because VYXEOS™ would replace the need for the use of current chemotherapy agents. The applicant explained that charges for chemotherapy drugs are grouped with charges for oncology, diagnostic radiology, therapeutic radiology, nuclear medicine, CT scans, and other imaging services in the “Radiology Charge Amount.” According to the applicant, removing 100 percent of the “Radiology Charge Amount” would understate the cost of care for treatment involving VYXEOS™ for patients who may be eligible because treatment involving VYXEOS™ would be unlikely to replace many of the services captured in the “Radiology Charge Amount” category. The applicant found that chemotherapy charges represent less than 20 percent of the charges associated with revenue centers grouped into the “Radiology Charge Amount” and removed 20 percent of the radiology charge amount in order to capture the effect of removing chemotherapy pharmacy charges. The applicant noted that regardless of the type of induction chemotherapy, patients being treated for AML have AML-related complications, such as bleeding or infection that require supportive care drug therapy. For this reason, it is

expected that eligible patients receiving treatment involving VYXEOS™ will continue to incur other pharmacy and IV therapy charges for AML-related complications.

After removing the charges for the prior technology, the applicant standardized the charges. The applicant then applied an inflation factor of 1.09357, the value used in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527) to update the charges from FY 2016 to FY 2018. According to the applicant, for the primary new technology add-on payment cohort, the cost criterion was met without consideration of VYXEOS™ charges. The average case-weighted standardized charge was \$170,458, which exceeded the average case-weighted Table 10 MS-DRG threshold amount of \$82,561 by \$87,897.

The applicant provided additional analyses with the inclusion of VYXEOS™ charges under 3-vial, 4-vial, 6-vial, and 10-vial treatment scenarios. According to the applicant, the cost criterion was satisfied in each of these scenarios, with charges in excess of the average case-weighted threshold amount.

Finally, the applicant also provided the following sensitivity analyses (that did not include charges for VYXEOS™) using the methodology above:

- Sensitivity Analysis 1—limited the cohort to patients who have been diagnosed with AML without remission (C92.00 or C92.50) who received chemotherapy and did not receive bone marrow transplant.
- Sensitivity Analysis 2—the modified cohort was limited to patients who have been diagnosed with relapsed AML who received chemotherapy and did not receive bone marrow transplant.

- Sensitivity Analysis 3—the modified cohort was limited to patients who have been diagnosed with AML and who did not receive bone marrow transplant.
- Sensitivity Analysis 4—the primary cohort was maintained, but 100 percent of the charges for revenue centers grouped into the “Pharmacy Charge Amount” were excluded.
- Sensitivity Analysis 5—identified patients who have been diagnosed with AML in remission.

The applicant noted that, in all of the sensitivity analysis scenarios, the average case-weighted standardized charge per case exceeded the average case-weighted Table 10 MS-DRG threshold amount. Based on all of the analyses above, the applicant maintained that VYXEOS™ met the cost criterion. We invited public comments on whether VYXEOS™ meets the cost criterion.

Comment: The applicant noted the detailed summary presented in the proposed rule of the cost analysis of the VYXEOS™, including a primary cohort analysis and five sensitivity analyses. The applicant stated that, in each of the analyses, it was demonstrated that the average case-weighted standardized charge per case for the applicable MS-DRGs exceeded the average case-weighted threshold amount before considering the average per patient cost of VYXEOS™ to the hospital.

Response: We appreciate the applicant’s input.

After consideration of the public comments we received, we believe that VYXEOS™ meets the cost criterion.

With regard to substantial clinical improvement, according to the applicant, clinical data results have shown that the use of VYXEOS™ represents a substantial clinical improvement for the treatment of AML in newly diagnosed high-risk, older (60 years of age and older) patients, marked by statistically significant improvements in overall survival, event free survival and response rates, and in relapsed patients age 18 to 65 years of age, where a statistically significant improvement in overall survival has been documented for the poor-risk subset of patients as defined by the European Prognostic Index. In both groups of patients, the applicant stated that there was significant improvement in survival for the high-risk patient group. The applicant provided the following specific clinical data results.

- The applicant stated that clinical data results show that treatment with VYXEOS™ for older patients (60 years of age and older) who have been diagnosed with untreated, high-risk AML will result in superior survival rates, as compared to patients treated with conventional “7+3” free drug dosing. The applicant provided a summary of the pivotal Phase III Study 301 in which 309 patients were enrolled, with 153 patients randomized to the VYXEOS™ treatment arm and 156 to the “7+3” free drug dosing treatment arm. Among patients who were 60 to 69 years old, there were 96 patients in the VYXEOS™ treatment arm and 102 in the “7+3” free drug dosing treatment arm. For patients who were 70 to 75 years old, there were 57 and 54 patients in each treatment arm, respectively. The applicant noted that the data results from the Phase III Study 301 demonstrated that first-line treatment of patients diagnosed with high-risk AML in the VYXEOS™ treatment arm resulted in substantially greater median overall survival of

9.56 months versus 5.95 months in the “7+3” free drug dosing treatment arm (hazard ratio of 0.69;  $p = 0.005$ ).

- The applicant further asserted that high-risk, older patients (60 years old and older) previously untreated for diagnoses of AML will have a lower risk of early death when treated with VYXEOS™ than those treated with the conventional “7+3” free drug dosing. The applicant cited Medeiros, et al.<sup>82</sup>, which reported a large observational study of Medicare beneficiaries and noted the following: the data result of the study showed that 50 to 60 percent of elderly patients diagnosed with AML remain untreated following diagnosis; treated patients were more likely younger, male, and married, and less likely to have secondary diagnoses of AML, poor performance indicators, and poor comorbidity scores compared to untreated patients; and in multivariate survival analyses, treated patients exhibited a significant 33 percent lower risk of death compared to untreated patients.

Based on data from the Phase III Study 301<sup>83</sup>, the applicant cited the following results: the rate of 60-day mortality was less in the VYXEOS™ treatment arm (13.7 percent) versus the “7+3” free drug dosing treatment arm (21.2 percent); the reduction in early mortality was due to fewer deaths from refractory AML (3.3 percent versus 11.3 percent), with very similar rates of 60-day mortality due to adverse events (10.4 percent versus 9.9 percent); there were fewer deaths in the VYXEOS™ treatment arm versus the “7+3” free drug dosing treatment arm during the treatment phase (7.8 percent versus 11.3

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<sup>82</sup> Medeiros, B., et al., “Big data analysis of treatment patterns and outcomes among elderly acute myeloid leukemia patients in the United States”, *Ann Hematol*, 2015, vol. 94(7), pp. 1127–1138.

<sup>83</sup> Lancet, J., et al., “Final results of a Phase III randomized trial of VYXEOS (CPX-351) versus 7+3 in older patients with newly diagnosed, high-risk (secondary) AML”. Abstract and oral presentation at American Society of Clinical Oncology (ASCO), June 2016.

percent); and there were fewer deaths in the VYXEOS™ treatment arm during the follow-up phase than in the “7+3” free drug dosing treatment arm (59.5 percent versus 71.5 percent).

- The applicant asserted that high-risk, older patients (60 years old and older) previously untreated for a diagnosis of AML exhibited statistically significant improvements in response rates after treatment with VYXEOS™ versus treatment with the conventional “7+3” free drug chemotherapy dosing, suggesting that the use of VYXEOS™ is a superior pre-transplant induction treatment versus “7+3” free drug dosing. Restoration of normal hematopoiesis is the ultimate goal of any therapy for AML diagnoses. The first phase of treatment consists of induction chemotherapy, in which the goal is to “empty” the bone marrow of all hematopoietic elements (both benign and malignant), and to allow repopulation of the marrow with normal cells, thereby yielding remission. According to the applicant, post-induction response rates were significantly higher following the use of VYXEOS™, which elicited a 47.7 percent total response rate and a 37.3 percent rate for CR, whereas the total response and CR rates for the “7+3” free drug dosing arm were 33.3 percent and 25.6 percent, respectively. The CR + CRi rates for patients who were 60 to 69 years of age were 50.0 percent in the VYXEOS™ treatment arm and 36.3 percent in the “7+3” free drug dosing treatment arm, with an odds ratio of 1.76 (95 percent CI, 1.00-3.10). For patients who were 70 to 75 years old, the rates of CR + CRi were 43.9 percent in the VYXEOS™ treatment arm and 27.8 percent in the “7+3” free drug dosing treatment arm.

- The applicant asserted that VYXEOS™ treatment will enable high-risk, older patients (60 years old and older) to bridge to allogeneic transplant, and VYXEOS™ treated responding patients will have markedly better outcomes following transplant. The applicant stated that diagnoses of secondary AML are considered incurable with standard chemotherapy approaches and, as with other high-risk hematological malignancies, transplantation is a useful treatment alternative. The applicant further stated that autologous HSCT has limited effectiveness and at this time, only allogeneic HSCT with full intensity conditioning has been reported to produce long-term remissions. However, the applicant stated that the clinical study by Medeiros, et al. reported that, while the use of allogeneic HSCT is considered a potential cure for AML, its use is limited in older patients because of significant baseline comorbidities and increased transplant-related morbidity and mortality. Patients in either treatment arm of the Phase III Study 301 responding to induction with a CR or CR+CRi (n=125) were considered for allogeneic hematopoietic cell transplant (HCT) when possible. In total, 91 patients were transplanted: 52 (34 percent) from the VYXEOS™ treatment arm and 39 (25 percent) from the “7+3” free drug dosing treatment arm. Patient and AML characteristics were similar according to randomized arm, including percentage of patients in each treatment arm that underwent transplant in CR+CRi status. However, the applicant noted that the VYXEOS™ treatment arm contained a higher percentage of older patients (70 years old or older) who were transplanted (VYXEOS™, 31 percent; “7+3” free drug dosing, 15 percent).<sup>84</sup>

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<sup>84</sup> Stone Hematology 2004; Gordon AACR 2016; NCI. Available at: [www.cancer.gov](http://www.cancer.gov).

According to the applicant, patient outcome following transplant strongly favored patients in the VYXEOS™ treatment arm. The Kaplan-Meier analysis of the 91 transplanted patients landmarked at the time of HCT showed that patients in the VYXEOS™ treatment arm had markedly better overall survival (hazard ratio 0.46;  $p=0.0046$ ). The time-dependent Adjustment Model (Cox proportional hazard ratio) was used to evaluate the contribution of VYXEOS™ treatment to overall survival rate after adjustment for transplant and showed that VYXEOS™ treatment remained a significant contributor, even after adjusting for transplant. The time-dependent Cox hazard ratio for overall survival rates in the VYXEOS™ treatment arm versus the “7+3” free drug dosing treatment arm was 0.51 (95 percent CI, 0.35–0.75;  $p=.0007$ ).

- The applicant asserted that VYXEOS™ treatment of previously untreated older patients (60 years old and older) diagnosed with high-risk AML increases the response rate and improves survival compared to conventional “7+3” free drug dosing treatment in patients diagnosed with FLT3 mutation. The applicant noted the following: approximately 20 to 30 percent of AML patients harbor some form of FLT3 mutation, AML patients with a FLT3 mutation have a higher relapse rate and poorer prognosis than the overall population diagnosed with AML, and the most common type of mutation is internal tandem duplication (ITD) mutation localized to a membrane region of the receptor.

The applicant cited Gordon, et al., 2016<sup>85</sup>, which reported on the significant anti-leukemic activity of VYXEOS™ treatment in AML blasts exhibiting high-risk characteristics, including FLT3-ITD, that are typically associated with poor outcomes when treated with conventional “7+3” free drug dosing treatment. To determine whether the improved complete remission and overall survival rates of treatment using VYXEOS™ as compared to conventional “7+3” free drug dosing treatment are attributable to liposome-mediated altered drug PK or direct cellular interactions with specific AML blast samples, the authors evaluated cytotoxicity in 53 AML patient specimens. Cytotoxicity results were correlated with patient characteristics, as well as VYXEOS™ treatment cellular uptake and molecular phenotype status including FLT3-ITD, which is a predictor of poor patient outcomes to conventional “7+3” free drug dosing treatment. The applicant stated that a notable result from this research was the observation that AML blasts exhibiting the FLT3-ITD phenotype exhibited some of the lowest IC<sub>50</sub> (the 50 percent inhibitory concentration) values and, as a group, were five-fold more sensitive to the VYXEOS™ treatment than those with wild type FLT3. In addition, there was evidence that increased sensitivity to VYXEOS™ treatment was associated with increased uptake of the drug-laden liposomes by the patient-derived AML blasts. The applicant noted that Gordon, et al. 2016, concluded taken together, the data are consistent with clinical observations where VYXEOS™ treatment retains significant anti-leukemic activity in AML patients exhibiting high-risk characteristics.

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<sup>85</sup> Gordon, M., Tardi, P., Lawrence, M.D., et al., “CPX-351 cytotoxicity against fresh AML blasts increased for FLT3-ITD+ cells and correlates with drug uptake and clinical outcomes,” Abstract 287 and poster presented at AACR (American Association for Cancer Research), April 2016.

The applicant also noted that a subanalysis of Phase III Study 301 identified 22 patients who had been diagnosed with FLT3 mutation in the VYXEOS™ treatment arm and 20 in the “7+3” free drug dosing treatment arm, which resulted in the following response rates of FLT3 mutated patients, which were higher with VYXEOS™ treatments (15 of 22, 68.2 percent) versus “7+3” free drug dosing treatments (5 of 20, 25.0 percent); and the Kaplan-Meier analysis of the 42 FLT3 mutated patients showed that patients in the VYXEOS™ treatment arm had a trend towards better overall survival rates (hazard ratio 0.57;  $p=0.093$ ).

- The applicant asserted that younger patients (18 to 65 years old) with poor risk first relapse AML have shown higher response rates with VYXEOS™ treatment versus conventional “salvage” chemotherapy. Overall, the applicant stated that the use of VYXEOS™ had an acceptable safety profile in this patient population based on 60-day mortality data. Study 205<sup>86</sup> was a randomized study comparing VYXEOS™ treatment against the investigator’s choice of first “salvage” chemotherapy in patients who had been diagnosed with relapsed AML after a first remission lasting greater than 1 month (VYXEOS™ treatment arm,  $n=81$  and “7+3” free drug dosing treatment arm,  $n=44$ ; 18 to 65 years old). Investigator’s choice was almost always based on cytarabine + anthracycline, usually with the addition of one or two new agents. According to the applicant, treatment involving VYXEOS™ demonstrated a higher rate of morphological leukemia clearance among all patients, 43.2 percent versus 40.0 percent, and the

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<sup>86</sup> Cortes, J., et al., “Significance of prior HSCT on the outcome of salvage therapy with CPX-351 or conventional chemotherapy among first relapse AML patients.” Abstract and poster presented at ASH 2011.

advantage was most apparent in poor-risk patients, 78.7 percent versus 44.4 percent, as defined by the European Prognostic Index (EPI). In the subset analysis of this EPI poor-risk patient subset, the applicant stated there was a significant improvement in survival rate (6.6 versus 4.2 months median, hazard ratio=0.55, p=0.02) and improved response rate (39.3 percent versus 27 percent). The applicant also noted the following: the safety profile for the use of VYXEOS™ was qualitatively similar to that of control “salvage” therapy, with nearly identical 60-day mortality rates (14.8 percent versus 15.9 percent); among VYXEOS™ treated patients, those with no history of prior HSCT (n=59) had higher response rates (54.2 percent versus 37.8 percent) and lower 60-day mortality (10.2 percent versus 16.2 percent); overall, the use of VYXEOS™ had acceptable safety based on 60-day mortality data, with somewhat higher frequency of neutropenia and thrombocytopenia-related grade III-IV adverse events. Even though these patients are younger (18 to 65 years old) than the population studied in Phase III Study 301 (60 years old and older), Study 205 patients were at a later stage of the disease and almost all had responded to first-line therapy (cytarabine + anthracycline) and had relapsed. The applicant also cited Cortes, et al. 2015<sup>87</sup>, which reported that patients who have been diagnosed with first relapse AML have limited likelihood of response and short expected survival following “salvage” treatment with the results from literature showing that:

- Mitoxantrone, etoposide, and cytarabine induced response in 23 percent of patients, with median overall survival of only 2 months.

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<sup>87</sup> Cortes, J., et al., (2015), “Phase II, multicenter, randomized trial of CPX-351 (cytarabine:daunorubicin) liposome injection versus intensive salvage therapy in adults with first relapse AML,” *Cancer*, January 2015, pp. 234-42.

- Modulation of deoxycytidine kinase by fludarabine led to the combination of fludarabine and cytarabine, resulting in a 36 percent CR rate with median remission duration of 39 weeks.
- First salvage gemtuzumab ozogamicin induced CR+CRp (or CR+CRi) response in 30 percent of patients with CD33+ AML and, for patients with short first CR durations, appeared to be superior to cytarabine-based therapy.

The applicant noted that Study 205 results showed the use of VYXEOS™ retained greater anti-leukemic efficacy in patients who have been diagnosed with poor-risk first relapse AML, and produced higher morphological leukemia clearance rates (78.7 percent) compared to conventional “salvage” therapy (44 percent). The applicant further noted that, overall, the use of VYXEOS™ had acceptable safety profile in this patient population based on 60-day mortality data.

Based on all of the data presented above, the applicant concluded that VYXEOS™ represents a substantial clinical improvement over existing technologies. However, in the proposed rule, we stated we were concerned that, although there was an improvement in a number of outcomes in Phase III Study 301, specifically overall survival rate, lower risk of early death, improved response rates, better outcomes following transplant, increased response rate and overall survival in patients diagnosed with FLT3 mutation, and higher response rates versus conventional “salvage” chemotherapy in younger patients diagnosed with poor-risk first relapse, the improved outcomes may not be statistically significant. Furthermore, we indicated we were concerned that the overall improvement in survival from 5.95 months to 9.56 months may not represent a substantial clinical

improvement. In addition, the rate of adverse events in both treatment arms of Study 205, given the theoretical benefit of reduced toxicity with the liposomal formulation, was similar for both the VYXEOS™ and “7+3” free drug treatment groups. Therefore, we also were concerned that there is a similar rate of adverse events, such as febrile neutropenia (68 percent versus 71 percent), pneumonia (20 percent versus 15 percent), and hypoxia (13 percent versus 15 percent), with the use of VYXEOS™ as compared with the conventional “7+3” free drug regimen.

We invited public comments on whether VYXEOS™ meets the substantial clinical improvement criterion.

Comment: Several commenters supported the use of VYXEOS™ as a viable treatment option in the treatment of older adults who have been diagnosed with high-risk AML, and believed that clinically meaningful survival and response improvements have been and can be achieved for a highly difficult to treat population of patients with extremely limited treatment options. The applicant summarized the efficacy outcomes of the pivotal Phase III Study 301 and noted that significant improvement in overall survival was achieved with a hazard ratio of 0.69,  $p=0.005$ . The applicant indicated that, although many days of increased survival are desired rather than few, clinical benefit cannot be determined solely by the absolute number of days or months of survival increase. Rather, clinical benefit is determined by the relative improvement in survival. The applicant stated that, based on the data results from the Phase III Study 301, the observed improvement in median survival was 3.61 months (Control, 5.95m versus VYXEOS, 9.56m). In other words, a 3.61 month increase in median survival is substantial and of

great benefit given an expected median survival of only 5.95 months for patients treated with control arm therapy. The applicant believed that this result was statistically significant and demonstrates clinically high benefits.

Response: We appreciate the commenters' and the applicant's input in response to our concerns. After consideration of the public comments we received, we believe that based on the statistically significant increase in median survival rate from the Phase III Study 301, VYXEOS™ is a treatment option which offers a substantial clinical improvement over standard therapy for patients who have been diagnosed with AML. Therefore, we believe that VYXEOS™ meets the substantial clinical improvement criterion.

Based on evaluation of the new technology add-on payment application and consideration of the public comments we received, we have determined that VYXEOS™ meets all of the criteria for approval for new technology add-on payments. Therefore, we are approving new technology add-on payments for VYXEOS™ for FY 2019. We expect that VYXEOS™ will be administered, as indicated, for use in the treatment of adults who have been newly diagnosed with therapy-related acute myeloid leukemia (t-AML) or AML with myelodysplasia-related changes (AML-MRC). Cases involving the use of VYXEOS™ that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure codes: XW033B3 (Introduction of cytarabine and caunorubicin liposome antineoplastic into peripheral vein, percutaneous approach, new technology group 3); and XW043B3 (Introduction of cytarabine and daunorubicin liposome antineoplastic into central vein, percutaneous approach, new technology group 3).

In its application, the applicant estimated that the average cost of a single vial for VYXEOS™ is \$7,750 (daunorubicin 44 mg/m<sup>2</sup> and cytarabine 100 mg/m<sup>2</sup>). The applicant stated that the first induction of 6 vials is administered in the inpatient hospital setting, with 31 percent of the patients receiving a second induction of an administration of 4 vials. Of the 31 percent of the patients that receive the second induction, 85 percent of the patients receive the second induction in the inpatient hospital setting during the same inpatient stay of the first induction. The applicant further stated that 32 percent of all of the patients receive a first consolidation therapy of an administration of 3 vials, with 50 percent of these patients being treated in the inpatient hospital setting. The applicant also indicated that 50 percent of all of the patients receive a second consolidation therapy of an administration of 3 vials, with 40 percent of these patients being treated in the inpatient hospital setting. As is our past practice, based on the information above, we believe that it is appropriate to use an average to set the maximum amount of vials used in the inpatient hospital setting. For the induction therapy, all patients receive an administration of 6 vials for the first induction in the inpatient hospital setting, with 31 percent of all of the patients receiving a second induction therapy of an administration of 4 vials -- of which 85 percent of these patients are treated in the inpatient hospital setting during the same stay as the first induction therapy. Therefore, we computed the average of 6 vials for the first induction plus 3.4 vials for the second induction (4 vials \* 0.85), which results in a maximum average of 9.4 vials used in the inpatient hospital setting. Therefore, the maximum average cost for VYXEOS™ used in the inpatient hospital setting is \$72,850 (\$7,750 cost per vial \* 9.4 vials). Under

§ 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS–DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of VYXEOS™ is \$36,425.

c. VABOMERE™ (meropenem-vaborbactam)

Melinta Therapeutics, Inc., submitted an application for new technology add-on payments for VABOMERE™ for FY 2019. VABOMERE™ is indicated for use in the treatment of adult patients who have been diagnosed with complicated urinary tract infections (cUTIs), including pyelonephritis, caused by designated susceptible bacteria. VABOMERE™ received FDA approval on August 29, 2017.

Complicated urinary tract infections (cUTIs) are defined as chills, rigors, or fever (temperature of greater than or equal to 38.0°C); elevated white blood cell count (greater than 10,000/mm<sup>3</sup>), or left shift (greater than 15 percent immature PMNs); nausea or vomiting; dysuria, increased urinary frequency, or urinary urgency; lower abdominal pain or pelvic pain. Acute pyelonephritis is defined as chills, rigors, or fever (temperature of greater than or equal to 38.0°C); elevated white blood cell count (greater than 10,000/mm<sup>3</sup>), or left shift (greater than 15 percent immature PMNs); nausea or vomiting; dysuria, increased urinary frequency, or urinary urgency; flank pain; costo-vertebral angle tenderness on physical examination. Risk factors for infection with drug-resistant organisms do not, on their own, indicate a cUTI.<sup>88</sup> The increasing incidence of

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<sup>88</sup> Hooton, T. and Kalpana, G., 2018, “Acute complicated urinary tract infection (including pyelonephritis) in adults,” In A. Bloom (Ed.), UpToDate. Available at: <https://www.uptodate.com/contents/acute-complicated-urinary-tract-infection-including-pyelonephritis-in-adults>.

multidrug-resistant gram-negative bacteria, such as carbapenem-resistant Enterobacteriaceae (CRE), has resulted in a critical need for new antimicrobials.

The applicant reported that it has developed a beta-lactamase combination antibiotic, VABOMERE™, to treat cUTIs, including those caused by certain carbapenem-resistant organisms. By combining the carbapenem class antibiotic meropenem with vaborbactam, VABOMERE™ protects meropenem from degradation by certain CRE strains.

The applicant stated that meropenem, a carbapenem, is a broad spectrum beta-lactam antibiotic that works by inhibiting cell wall synthesis of both gram-positive and gram-negative bacteria through binding of penicillin-binding proteins (PBP). Carbapenemase producing strains of bacteria have become more resistant to beta-lactam antibiotics, such as meropenem. However, meropenem in combination with vaborbactam, inhibits the carbapenemase activity, thereby allowing the meropenem to bind PBP and kill the bacteria.

According to the applicant, vaborbactam, a boronic acid inhibitor, is a first-in class beta-lactamase inhibitor. Vaborbactam blocks the breakdown of carbapenems, such as meropenem, by bacteria containing carbapenemases. Although vaborbactam has no antibacterial properties, it allows for the treatment of resistant infections by increasing bacterial sensitivity to meropenem. New carbapenemase producing strains of bacteria have become more resistant to beta-lactam antibiotics. However, meropenem in combination with vaborbactam, can inhibit the carbapenemase enzyme, thereby allowing the meropenem to bind PBP and kill the bacteria. The applicant stated that the

vaborbactem component of VABOMERE™ helps to protect the meropenem from degradation by certain beta-lactamases, such as Klebsiella pneumonia carbapenemase (KPC). According to the applicant, VABOMERE™ is the first of a novel class of beta-lactamase inhibitors. The applicant asserted that VABOMERE™'s use of vaborbactam to restore the efficacy of meropenem is a novel approach to fighting antimicrobial resistance.

The applicant stated that VABOMERE™ is indicated for use in the treatment of adult patients 18 years old and older who have been diagnosed with cUTIs, including pyelonephritis. The recommended dosage of VABOMERE™ is 4 grams (2 grams of meropenem and 2 grams of vaborbactam) administered every 8 hours by intravenous (IV) infusion over 3 hours with an estimated glomerular filtration rate (eGFR) greater than or equal to 50 ml/min/1.73m<sup>2</sup>. The recommended dosage of VABOMERE™ for patients with varying degrees of renal function is included in the prescribing information. The duration of treatment is for up to 14 days.

As discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, according to the applicant, VABOMERE™ is designed primarily for the treatment of gram-negative bacteria that are resistant to other current antibiotic therapies. The applicant stated that VABOMERE™ does not use the same or similar mechanism of action to achieve a therapeutic outcome.

The applicant asserted that the vaborbactam component of VABOMERE™ is a new class of beta-lactamase inhibitor that protects meropenem from degradation by certain enzymes such as carbapenamases. The applicant indicated that the structure of vaborbactam is distinctly optimized for inhibition of serine carbapenamases and for combination with a carbapenem antibiotic. Beta-lactamase inhibitors are agents that inhibit bacterial enzymes—enzymes that destroy beta-lactam antibiotics and result in resistance to first-line as well as “last defense” antimicrobials used in hospitals. According to the applicant, in order for carbapenems to be effective these enzymes must be inhibited. The applicant stated that the addition of vaborbactam as a potent inhibitor against Class A and C serine beta-lactamases, particularly KPC, represents a new mechanism of action. According to the applicant, VABOMERE™’s use of vaborbactam to restore the efficacy of meropenem is a novel approach and that the FDA’s approval of VABOMERE™ for the treatment of cUTIs represents a significant label expansion because meropenem alone (without the addition of vaborbactam) is not indicated for the treatment of patients with cUTI infections. Therefore, the applicant maintained that this technology and resistance-fighting mechanism involved in the therapeutic effect achieved by VABOMERE™ is distinct from any other existing product. The applicant noted that VABOMERE™ was designated as a qualified infectious disease product (QIDP) in January 2014. This designation is given to antibacterial products that treat serious or life-threatening infections under the Generating Antibiotic Incentives Now (GAIN) title of the FDA Safety and Innovation Act.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20300), we stated that we believed, although the molecular structure of the vaborbactam component of VABOMERE™ is unique, the bactericidal action of VABOMERE™ is the same as meropenem alone. In addition, we noted that there are other similar beta-lactam/beta-lactamase inhibitor combination therapies currently available as treatment options. We invited public comments on whether VABOMERE™'s mechanism of action is similar to other existing technologies.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, the applicant asserted that patients who may be eligible to receive treatment involving VABOMERE™ include hospitalized patients who have been diagnosed with a cUTI. These potential cases can be identified by a variety of ICD-10-CM diagnosis codes. Therefore, potential cases representing patients who have been diagnosed with a cUTI who may be eligible for treatment involving VABOMERE™ can be mapped to multiple MS-DRGs. The following are the most commonly used MS-DRGs for patients who have been diagnosed with a cUTI: MS-DRG 690 (Kidney and Urinary Tract Infections without MCC); MS-DRG 853 (Infectious and Parasitic Diseases with O.R. Procedure with MCC); MS-DRG 870 (Septicemia or Severe Sepsis with Mechanical Ventilation 96+ Hours); MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ Hours with MCC); and MS-DRG 872 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ Hours without MCC). Potential cases representing patients who may be eligible for treatment with VABOMERE™ would

be assigned to the same MS–DRGs as cases representing hospitalized patients who have been diagnosed with a cUTI.

With respect to the third criterion, whether the use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant asserted that the use of VABOMERE™ would treat a different patient population than existing and currently available treatment options. According to the applicant, VABOMERE™'s use of vaborbactam to restore the efficacy of meropenem is a novel approach to fighting the global and national public health crisis of antimicrobial resistance, and as such, the use of VABOMERE™ reaches different and expanded patient populations. The applicant further asserted that future patient populations are saved as well because the growth of resistant infections is slowed. The applicant believed that, because of the threat posed by gram-negative bacterial infections and the limited number of available treatments currently on the market or in development, the combination structure and development of VABOMERE™ and its potential expanded use is new. We stated in the proposed rule that while the applicant believes that VABOMERE™ treats a different patient population, we note that VABOMERE™ is only approved for use in the treatment of adult patients who have been diagnosed with cUTIs. Therefore, we stated that it appears that VABOMERE™ treats the same population (adult patients with a cUTI) and there are already other treatment options available for diagnoses of cUTIs.

In the proposed rule, we stated that we were concerned VABOMERE™ may be substantially similar to existing beta-lactam/beta-lactamase inhibitor combination

therapies. As noted in the proposed rule and above, we were concerned that VABOMERE™ may have a similar mechanism of action, treats the same population (patients with a cUTI) and would be assigned to the same MS-DRGs (similar to existing beta-lactam/beta-lactamase inhibitor combination therapies currently available as treatment options). We invited public comments on whether VABOMERE™ meets the substantial similarity criteria and the newness criterion.

Comment: The applicant addressed the issue regarding the substantial similarity criteria and recommended CMS apply its standards under the newness criterion in a manner that recognizes the innovative nature and unique aspects of VABOMERE™. The applicant explained that meropenem alone is not indicated to treat a diagnosis of a cUTI and, moreover, is not active against KPC-producing CRE. The applicant stated that the action of the vaborbactam's protection of the meropenem is fundamental and essential to how VABOMERE™ acts on and inhibits bacterial enzymes, and allows VABOMERE™ to treat even those infections that would otherwise be resistant and not susceptible to therapy with meropenem alone. The applicant believed that, accordingly, VABOMERE™'s mechanism of action is distinct from that of meropenem and is not the same. The applicant further explained that, meropenem is degraded by beta-lactamases enzymes, including KPC enzymes, and, therefore, is ineffective against KPC-producing CRE. The applicant indicated that VABOMERE™, in contrast, is not degraded by these enzymes and is able to provide effective treatment against infections that are not susceptible to meropenem. The applicant also reiterated that, unlike meropenem alone, VABOMERE™ is on-label indicated for the use in the treatment of a cUTI diagnosis.

Several commenters believed that VABOMERE™ may be substantially similar to other existing therapies. The applicant believed that CMS' application of the "substantial similarity" standards for newness as described in prior IPPS rulemakings, including aspects of CMS' discussion of these criteria in the FY 2019 IPPS/LTCH PPS proposed rule as applied to VABOMERE™, are restrictive and may impose unnecessarily narrow standards for newness that are not included in the statute or regulations. The applicant stated that, if applied as suggested in the proposed rule, CMS may not account for the realities and circumstances involved in developing and bringing a new therapy—particularly a new antibiotic—to the U.S. market. The applicant suggested CMS apply its newness standards in a manner that recognizes the innovative nature and unique aspects of new technologies, like VABOMERE™, consistent with the text and spirit of the new technology add-on payment provisions.

Other commenters stated that, given the recognized shortage of new antibiotics, the unique benefits of VABOMERE™ should not be ignored because of substantial similarities to other medicines.

Response: We appreciate the applicant's and commenters' input. We agree that VABOMERE™ has a unique mechanism of action that is not similar to other existing technologies because it is a new class of beta-lactamase inhibitor that protects meropenem from degradation by certain enzymes such as carbapenamases. We agree that the addition of vaborbactam as a potent inhibitor against Class A and C serine beta-lactamases, particularly KPC, represents a new mechanism of action. After consideration

of the public comments we received, we believe that VABOMERE™ is not substantially similar to existing technologies and meets the newness criterion.

With regard to the cost criterion, the applicant conducted the following analysis to demonstrate that the technology meets the cost criterion. In order to identify the range of MS-DRGs to which cases representing potential patients who may be eligible for treatment using VABOMERE™ may map, the applicant used the Premier Research Database from 2nd Quarter 2015 to 4th Quarter 2016. According to the applicant, Premier is an electronic laboratory, pharmacy, and billing data repository that collects data from over 600 hospitals and captures nearly 20 percent of U.S. hospitalizations. The applicant's list of most common MS-DRGs is based on data regarding CRE from the Premier Research Database. According to the applicant, approximately 175 member hospitals also submit microbiology data, which allowed the applicant to identify specific pathogens such as CRE infections. Using the Premier Research Database, the applicant identified over 350 MS-DRGs containing data for 2,076 cases representing patients who had been hospitalized for CRE infections. The applicant used the top five most common MS-DRGs: MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation > 96 Hours with MCC), MS-DRG 853 (Infectious and Parasitic Disease with O.R. Procedure with MCC), MS-DRG 870 (Septicemia or Severe Sepsis with Mechanical Ventilation > 96 Hours), MS-DRG 872 (Septicemia or Severe Sepsis without Mechanical Ventilation > 96 Hours without MCC), and MS-DRG 690 (Kidney and Urinary Tract Infections without MCC), to which 627 cases representing potential patients who may be

eligible for treatment involving VABOMERE™, or approximately 30.2 percent of the total cases identified, mapped.

The applicant reported that the resulting 627 cases from the identified top 5 MS-DRGs have an average case-weighted unstandardized charge per case of \$74,815. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20301), we noted that, instead of using actual charges from the Premier Research Database, the applicant computed this amount based on the average case-weighted threshold amounts in Table 10 from the FY 2018 IPPS/LTCH PPS final rule. For the rest of the analysis, the applicant adjusted the average case-weighted threshold amounts (referred to above as the average case-weighted unstandardized charge per case) rather than the actual average case-weighted unstandardized charge per case from the Premier Research Database. According to the applicant, based on the Premier data, \$1,999 is the mean antibiotic costs of treating patients hospitalized with CRE infections with current therapies. The applicant explained that it identified 69 different regimens that ranged from 1 to 4 drugs from a study conducted to understand the current management of patients diagnosed with CRE infections. Accordingly, the applicant estimated the removal of charges for a prior technology of \$1,999. The applicant then standardized the charges. The applicant applied an inflation factor of 9.357 percent from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527) to inflate the charges. At the time of the development of the proposed rule, the applicant noted that it did not yet have sufficient charge data from hospitals and would work to supplement its application with the information once it was available. However, for purposes of calculating charges, the applicant used the average charge as

the wholesale acquisition cost (WAC) price for a treatment duration of 14 days and added this amount to the average charge per case. Using this estimate, the applicant calculated the final inflated case-weighted standardized charge per case as \$91,304, which exceeded the average case-weighted threshold amount of \$74,815. Therefore, the applicant asserted that VABOMERE™ met the cost criterion.

In the proposed rule, we indicated we were concerned that, as noted earlier, instead of using actual charges from the Premier Research Database, the applicant computed the average case-weighted unstandardized charge per case based on the average case-weighted threshold amounts in Table 10 from the FY 2018 IPPS/LTCH PPS final rule. Because the applicant did not demonstrate that the average case-weighted standardized charge per case for VABOMERE™ (using actual charges from the Premier Research Database) would exceed the average case-weighted threshold amounts in Table 10, we were unable to determine if the applicant met the cost criterion. We invited public comments on whether VABOMERE™ met the cost criterion, including with respect to the concern regarding the applicant's analysis.

Comment: The applicant addressed CMS' concern regarding the cost criterion and analysis and submitted a revised cost analysis in response. The applicant conducted a revised analysis using claims from the FY 2016 MedPAR to demonstrate that VABOMERE™ meets the cost criterion. To identify potential cases representing patients who may be eligible for treatment involving VABOMERE™, the applicant identified 34 ICD-10-CM diagnosis codes from claims from the FY 2016 MedPAR specific to the anticipated VABOMERE™ patient population. The applicant distinguished the 34

ICD-10-CM diagnosis codes by three different subsets, with Subset 1 based on 17 of the 34 ICD-10-CM diagnosis codes; Subset 2 based on 13 of the 34 ICD-10-CM diagnosis codes; and Subset 3 based on 8 of the 34 ICD-10-CM diagnosis codes. The applicant noted that the 8 ICD-10-CM diagnosis codes used in the Subset 3 analysis also are included in all three of the analyses, and the 13 ICD-10-CM diagnosis codes included in the Subset 2 analysis also are included among the 17 diagnosis codes used in the Subset 1 analysis.

For each subset, the applicant conducted a cost analysis for 100 percent of the identified cases, 75 percent of the identified cases, the top 20 MS-DRGs to which potential cases would map, and the top 10 MS-DRGs to which potential cases would map. For each subset, the applicant performed the following: (1) calculated the case-weighted unstandardized charge per case; (2) removed 100 percent of the drug charges from the relevant cases in order to conservatively estimate for charges for drugs that potentially may be replaced by VABOMERE™; (3) standardized the charges; (4) applied the 2-year inflation factor of 9.357 percent from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527); (5) added the charges for VABOMERE™ (the applicant calculated the charges for VABOMERE™ by converting the costs of VABOMERE™ to charges and dividing the costs by the national CCR of 0.194 for “Drugs” from the FY2018 IPPS/LTCH PPS final rule (82 FR 38103)); and (6) computed the inflated average case-weighted standardized charge per case and the average case-weighted threshold amount.

The applicant stated that the cost of VABOMERE™ is \$165 per vial. The applicant indicated that a patient receives two vials per dose and three doses per day. Therefore, the per-day cost of VABOMERE™ is \$990 per patient. The duration of therapy, consistent with the Prescribing Information, is up to 14 days. Therefore, the applicant estimated that the cost of VABOMERE™ to the hospital, per patient, is \$13,860. The applicant believed that, based on limited data from the product's launch, approximately 80 percent of VABOMERE™'s usage would be in the inpatient hospital setting, and approximately 20 percent of VABOMERE™'s usage may take place outside of the inpatient hospital setting. Therefore, the applicant stated that the average number of days of VABOMERE™ administration in the inpatient hospital setting is estimated at 80 percent of 14 days, or approximately 11.2 days. As a result, the applicant calculated that the total inpatient cost is \$11,088 ( $\$990 * 11.2$  days), which was then converted to charges in the calculations above.

The applicant stated that each subset demonstrated the average case-weighted standardized charge per case exceeded the average case-weighted threshold amount. Below are three tables, one for each subset, showing that the average case-weighted standardized charge per case exceeded the average case-weighted threshold amount.

<b>Subset 1 Cost Analysis</b>	<b>100 Percent of the Identified Cases</b>	<b>75 Percent of the Identified Cases</b>	<b>Top 20 MS-DRGs</b>	<b>Top 10 MS-DRGs</b>
Case-Weighted Unstandardized Charge Per Case	\$66,978	\$61,313	\$54,894	\$56,004
Inflated Average Case-Weighted Standardized Charge Per Case	\$112,692	\$107,943	\$102,924	\$103,444
Average Case-Weighted Threshold	\$56,213	\$54,782	\$51,993	\$52,941
<b>Difference</b>	<b>\$56,479</b>	<b>\$53,161</b>	<b>\$50,931</b>	<b>\$50,503</b>

<b>Subset 2 Cost Analysis</b>	<b>100 Percent of the Identified Cases</b>	<b>75 Percent of the Identified Cases</b>	<b>Top 20 MS-DRGs</b>	<b>Top 10 MS-DRGs</b>
Case-Weighted Unstandardized Charge Per Case	\$66,135	\$60,486	\$54,220	\$55,267
Inflated Average Case-Weighted Standardized Charge Per Case	\$112,108	\$107,340	\$102,430	\$102,892
Average Case-Weighted Threshold	\$55,924	\$54,421	\$51,749	\$52,683
<b>Difference</b>	<b>\$56,184</b>	<b>\$52,919</b>	<b>\$50,681</b>	<b>\$50,209</b>

<b>Subset 3 Cost Analysis</b>	<b>100 Percent of the Identified Cases</b>	<b>75 Percent of the Identified Cases</b>	<b>Top 20 MS-DRGs</b>	<b>Top 10 MS-DRGs</b>
Case-Weighted Unstandardized Charge Per Case	\$66,295	\$60,215	\$54,264	\$55,273
Inflated Average Case-Weighted Standardized Charge Per Case	\$112,168	\$107,111	\$102,444	\$102,886
Average Case-Weighted Threshold	\$56,014	\$54,333	\$51,823	\$52,733
<b>Difference</b>	<b>\$56,154</b>	<b>\$52,778</b>	<b>\$50,621</b>	<b>\$50,153</b>

Response: We appreciate the applicant's response and revised cost analysis. After consideration of the public comment and revised cost analysis we received, we believe that VABOMERE™ meets the cost criterion.

With regard to the substantial clinical improvement criterion, the applicant believed that the results from the VABOMERE™ clinical trials clearly establish that VABOMERE™ represents a substantial clinical improvement for treatment of deadly, antibiotic resistant infections. Specifically, the applicant asserted that VABOMERE™ offers a treatment option for a patient population unresponsive to, or ineligible for, currently available treatments, and the use of VABOMERE™ significantly improves clinical outcomes for a patient population as compared to currently available treatments. The applicant provided the results of the Targeting Antibiotic Non-sensitive Gram-Negative Organisms (TANGO) I and II clinical trials to support its assertion.

TANGO I<sup>89</sup> was a prospective, randomized, double-blinded trial of VABOMERE™ versus piperacillin-tazobactam in patients with cUTIs and acute pyelonephritis (A/P). TANGO I is also a noninferiority (NI) trial powered to evaluate the efficacy, safety, and tolerability of VABOMERE™ compared to piperacillin-tazobactam in the treatment of cUTI, including AP, in adult patients. There were two primary endpoints for this study, one for the FDA, which was cure or improvement and microbiologic outcome of eradication at the end-of-treatment (EOT) (day 5 to 14) in the proportion of patients in the Microbiologic Evaluable Modified Intent-to-Treat (m-MITT) population who achieved overall success (clinical cure or improvement and eradication of

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<sup>89</sup> Vabomere Prescribing Information, Clinical Studies (August 2017), available at: [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2017/2097761bl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/2097761bl.pdf).

baseline pathogen to <10<sup>4</sup> CFU/mL), and one for the European Medicines Agency (EMA), which was the proportion of patients in the co-primary m-MITT and Microbiologic Evaluable (ME) populations who achieve a microbiologic outcome of eradication (eradication of baseline pathogen to <10<sup>3</sup> CFU/mL) at the test-of-cure (TOC) visit (day 15 to 23). The trial enrolled 550 adult patients who were randomized 1:1 to receive VABOMERE™ as a 3-hour IV infusion every 8 hours, or piperacillin 4g-tazobactam 500 mg as a 30 minute IV infusion every 8 hours, for at least 5 days for the treatment of a cUTI. Therapy was set at a minimum of 5 days to fully assess the efficacy and safety of VABOMERE™. After a minimum of 5 days of IV therapy, patients could be switched to oral levofloxacin (500 mg once every 24 hours) to complete a total of 10-day treatment course (IV+oral), if they met pre-specified criteria. Treatment was allowed for up to 14 days, if clinically indicated.

Patient demographic and baseline characteristics were balanced between treatment groups in the m-MITT population.

- Approximately 93 percent of patients were Caucasian and 66 percent were females in both treatment groups.
- The mean age was 54 years old with 32 percent and 42 percent of the patients 65 years old and older in the VABOMERE™ and piperacillin/tazobactam treatment groups, respectively.
- Mean body mass index was approximately 26.5 kg/m<sup>2</sup> in both treatment groups.

- Concomitant bacteremia was identified in 12 (6 percent) and 15 (8 percent) of the patients at baseline in the VABOMERE™ and piperacillin/tazobactam treatment groups, respectively.

- The proportion of patients who were diagnosed with diabetes mellitus at baseline was 17 percent and 19 percent in the VABOMERE™ and piperacillin/tazobactam treatment groups, respectively.

- The majority of the patients (approximately 90 percent) were enrolled from Europe, and approximately 2 percent of the patients were enrolled from North America. Overall, in both treatment groups, 59 percent of the patients had pyelonephritis and 40 percent had a cUTI, with 21 percent and 19 percent of the patients having a non-removable and removable source of infection, respectively.

Mean duration of IV treatment in both treatment groups was 8 days and mean total treatment duration (IV and oral) was 10 days; patients with baseline bacteremia could receive up to 14 days of therapy (IV and oral). Approximately 10 percent of the patients in each treatment group in the m-MITT population had a levofloxacin-resistant pathogen at baseline and received levofloxacin as the oral switch therapy. According to the applicant, this protocol violation may have impacted the assessment of the outcomes at the TOC visit. These patients were not excluded from the analysis of adverse reactions (headache, phlebitis, nausea, diarrhea, and others) occurring in 1 percent or more of the patients receiving VABOMERE™, as the decision to switch to oral levofloxacin was based on post-randomization factors.

Regarding the FDA primary endpoint, the applicant stated the following:

- Overall success rate at the end of IV treatment (day 5 to 14) was 98.4 percent and 94 percent for the VABOMERE™ and piperacillin/tazobactam treatment groups, respectively.
- The TOC - 7 days post IV therapy was 76.5 percent (124 of 162 patients) for the VABOMERE™ group and 73.2 percent (112 of 153 patients) for the piperacillin/tazobactam group.
- Despite being an NI trial, TANGO-I showed a statistically significant difference favoring VABOMERE™ in the primary efficacy endpoint over piperacillin/tazobactam (a commonly used agent for gram-negative infections in U.S. hospitals).
- VABOMERE™ demonstrated statistical superiority over piperacillin-tazobactam with overall success of 98.4 percent of patients treated with VABOMERE™ in the TANGO-I clinical trial compared to 94.0 percent for patients treated with piperacillin/tazobactam, with a treatment difference of 4.5 percent and 95 percent CI of (0.7 percent, 9.1 percent).
- Because the lower limit of the 95 percent CI is also greater than 0 percent, VABOMERE™ was statistically superior to piperacillin/tazobactam.
- Because non-inferiority was demonstrated, then superiority was tested. Further, the applicant asserted that a non-inferiority design may have a “superiority” hypothesis imbedded within the study design that is appropriately tested using a non-inferiority design and statistical analysis. As such, according to the applicant, superiority trials concerning antibiotics are impractical and even unethical in many cases

because one cannot randomize patients to receive inactive therapies. The applicant stated that it would be unethical to leave a patient with a severe infection without any treatment.

- The EMA endpoint of eradication rates at TOC were higher in the VABOMERE™ group compared to the piperacillin/tazobactam group in both the m-MITT (66.7 percent versus 57.7 percent) and ME (66.3 percent and 60.4 percent) populations; however, it was not a statistically significant improvement.

In the proposed rule, we noted that the eradication rates of the EMA endpoint were not statistically significant. We invited public comments with respect to our concern as to whether the FDA endpoints demonstrating non-inferiority are statistically sufficient data to support that VABOMERE™ is a substantial clinical improvement in the treatment of patients with a cUTI.

In its application, the applicant offered data from the TANGO I trial comparing VABOMERE™ to piperacillin-tazobactam EOT/TOC rates in the setting of cUTIs/AP, but in the proposed rule we stated that the applicant did not offer a comparison to other antibiotic treatments of cUTIs known to be effective against gram-negative uropathogens, specifically other carbapenems<sup>90</sup>. In the proposed rule, we also noted that the study population is largely European (98 percent), and given the variable geographic distribution of antibiotic resistance we indicated we were concerned that the use of piperacillin/tazobactam as the comparator may have skewed the eradication rates in favor of VABOMERE™, or that the favorable results would not be applicable to patients in the

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<sup>90</sup> Golan, Y., 2015, "Empiric therapy for hospital-acquired, Gram-negative complicated intra-abdominal infection and complicated urinary tract infections: a systematic literature review of current and emerging treatment options," *BMC Infectious Diseases*, vol. 15, pp. 313. <http://doi.org/10.1186/s12879-015-1054-1>.

United States. We invited public comments regarding the lack of a comparison to other antibiotic treatments of cUTIs known to be effective against gram-negative uropathogens, whether the comparator the applicant used in its trial studies may have skewed the eradication rates in favor of VABOMERE™, and if the favorable results would be applicable to patients in the United States to allow for sufficient information in evaluating substantial clinical improvement.

In the proposed rule we noted that the applicant asserted that the TANGO II study<sup>91</sup> of monotherapy with VABOMERE™ compared to best available therapy (BAT) (salvage care of cocktails of toxic/poorly efficacious last resort agents) for the treatment of CRE infections showed important differences in clinical outcomes, including reduced mortality, higher clinical cure at EOT and TOC, benefit in important patient subgroups of HABP/VABP, bacteremia, renal impairment, and immunocompromised and reduced AEs, particularly lower nephrotoxicity in the study group. TANGO II is a multi-center, randomized, Phase III, open-label trial of patients with infections due to known or suspected CRE, including cUTI, AP, HABP/VABP, bacteremia, or complicated intra-abdominal infection (cIAI). Eligible patients were randomized 2:1 to monotherapy with VABOMERE™ or BAT for 7 to 14 days. There were no consensus BAT regimes, it could include (alone or in combination) a carbapenem, aminoglycoside, polymyxin B, colistin, tigecycline or ceftazidime-avibactam.

A total of 72 patients were enrolled in the TANGO II trial. Of these, 50 of the patients (69.4 percent) had a gram-negative baseline organism (m-MITT population), and

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<sup>91</sup> Alexander, et al., "CRE Infections: Results From a Retrospective Series and Implications for the Design of Prospective Clinical Trials," *Open Forum Infectious Diseases*.

43 of the patients (59.7 percent) had a baseline CRE (mCRE-MITT population). Within the mCRE-MITT population, 20 of the patients had bacteremia, 15 of the patients had a cUTI/AP, 5 of the patients had HABP/VABP, and 3 of the patients had a cIAI. The most common baseline CRE pathogens were *K. pneumoniae* (86 percent) and *Escherichia coli* (7 percent). Cure rates of the mCRE-MITT population at EOT for VABOMERE™ and BAT groups were 64.3 percent and 40 percent, respectively, TOC, 7 days after EOT, were 57.1 percent and 26.7 percent, respectively, 28-day mortality was 17.9 percent (5 of 28 patients) and 33.3 percent (5 of 15 patients), respectively. The applicant asserted that with further sensitivity analysis, taking into account prior antibiotic failures among the VABOMERE™ study arm, the 28-day all-cause mortality rates were even lower among VABOMERE™ versus BAT patients (5.3 percent (1 of 19 patients) versus 33.3 percent (5 of 15 patients)). Additionally, in July 2017, randomization in the trial was stopped early following a recommendation by the TANGO II Data Safety Monitoring Board (DSMB) based on risk-benefit considerations that randomization of additional patients to the BAT comparator arm should not continue.

According to the applicant, subgroup analyses of the TANGO II studies include an analysis of adverse events in which VABOMERE™ compared to BAT demonstrated the following:

- VABOMERE™ was associated with less severe treatment emergent adverse events of 13.3 percent versus 28 percent.
- VABOMERE™ was less likely to be associated with a significant increase in creatinine 3 percent versus 26 percent.

- Efficacy results of the TANGO II trial cUTI/AP subgroup demonstrated VABOMERE™ was associated with an overall success rate at EOT for the mCRE-MITT populations of 72 percent (8 of 11 patients) versus 50 percent (2 of 4 patients) and an overall success rate at TOC of 27.3 percent (3 of 7 patients) versus 50 percent (2 of 4 patients).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20303), we noted that many of the TANGO II trial outcomes showing improvements in the use of VABOMERE™ over BAT are not statistically significant. We also noted that the TANGO II study included a small number of patients; the study population in the mCRE-MITT only included 43 patients. Additionally, the cUTI/AP subgroup analysis only included a total of 15 patients and did not show an increased overall success rate at TOC (27.3 percent versus 50 percent) over the BAT group. We invited public comments with respect to our concern as to whether the lack of statistically significant outcomes and the small number of study participants allows for enough information to evaluate substantial clinical improvement.

We invited public comments on whether the VABOMERE™ technology meets the substantial clinical improvement criterion, including with respect to the specific concerns we have raised.

Comment: The applicant stated that VABOMERE™ represents and has demonstrated a substantial clinical improvement over other existing available therapies. The applicant also stated that, in particular, the results from the TANGO I and TANGO II, Phase III clinical trials establish that VABOMERE™ represents a “substantial clinical

improvement” for treatment of deadly, antibiotic-resistant infections. The applicant reiterated the results of the TANGO I and TANGO II trials and noted the results show VABOMERE™ had a statistically significant higher response rate than piperacillin/tazobactam in clinical cure and microbial eradication. The applicant stated that, in TANGO I, piperacillin-tazobactam was used as a comparator because it is very commonly used in U.S. hospitals to treat infections, including severe UTIs. The applicant indicated that, for example, as reflected in the VABOMERE™ Prescribing Information, the results of the TANGO I demonstrate superiority as evidenced by the overall success rate at the end of IV treatment (day 5 to 14) at 98.4 percent and 94 percent for the VABOMERE™ and piperacillin/tazobactam treatment groups, respectively, and the TOC - 7 days post IV therapy at 76.5 percent (124 of 162 patients) for the VABOMERE™ group and 73.2 percent (112 of 153 patients) for the piperacillin/tazobactam group. The applicant noted that, regarding non-inferiority and superiority data, the statutory and regulatory standards for new technology add-on payments do not preclude the relevance of non-inferiority data for purposes of demonstrating that a new therapy meets the “substantial clinical improvement” criterion. The applicant indicated that CMS has previously approved an application for new technology add-on payments and agreed that it represented a substantial clinical improvement over existing technologies on the basis of non-inferior data.

The applicant further indicated that, with regard to the size of the study population for TANGO II, this study focused specifically on a patient population known to have or suspected of having CRE. The applicant further stated that, despite a concerted effort to

search for patients with CRE infection and intensive pre-screening and screening activities across the globe, it took more than 2.5 years to enroll 77 patients. The applicant also noted that many other clinical studies in the context of new antibiotics development and other areas have involved similar or smaller cohorts of patients. According to the applicant, in the specific context of TANGO II, approximately 100 patients were pre-screened for each individual enrolled patient. The applicant stated that challenges are typical of the “ultra-orphan” world of antimicrobial development, where new treatments are needed, and pathogen-focused or resistance-focused clinical trials are crucial to accurately determine the efficacy of the treatment. The applicant further stated that unfortunately, study challenges (including difficulty consenting seriously-ill patients and their families, restricted entry criteria, exclusion for prior antibiotics, among others), along with a rare diagnosis, make larger trials with this life-threatening condition quite difficult to conduct. The applicant indicated that the patients enrolled in this study had a high incidence of underlying comorbidities and a high disease severity, with approximately 40 percent of the patients being immunocompromised and 75 percent with a Charlson Comorbidity Score >5. The applicant also noted appreciation that CMS recognized these challenges, particularly in the context of clinical trials for new antibiotic products that treat serious and life-threatening infections. The applicant believed that, for these reasons, the sample size used in the TANGO II trial does not undermine or diminish the significance of its results. The applicant indicated that the study focused specifically on patients with known or suspected CRE and was powered specifically to test certain endpoints, which it demonstrated—and, notably—did so using VABOMERE™ as a

monotherapy. The applicant believed that this is distinct from other clinical trials and underscores the significance of the TANGO II results. The applicant further noted that the TANGO II trial demonstrated certain improved outcomes with such statistical significance that the independent data monitoring review board recommended early termination of the randomization in the trial to allow patients to cross over to the VABOMERE™ arm instead of the BAT arm in the trial.

One commenter agreed with CMS' concern that improved outcomes in some trials may not be statistically significant and that the small number of patients, and the lack of a comparison to other antibiotic treatments of cUTIs known to be effective against uropathogens may not support that VABOMERE™ represents a substantial clinical improvement in the treatment of patients diagnosed with a cUTI.

Response: We appreciate the commenter's input and the applicant's responses to our concerns. After consideration of the public comments we received, we believe that VABOMERE™ offers a substantial clinical improvement for patients who have limited or no alternative treatment options because it is a new antibiotic that offers a treatment option for a patient population unresponsive to currently available treatments. Specifically, VABOMERE™ is a novel, first-in-class beta-lactamase inhibitor helps to protect the meropenem from degradation by certain beta-lactamases, such as KPC. Additionally, results from the TANGO II study demonstrate better outcomes regarding 28-day all-cause mortality taking into account prior antibiotic failures (VABOMERE™ patients (5.3 percent) versus BAT patients (33.3 percent),  $p = 0.03$ ), as well as decreases nephrotoxicity (VABOMERE™ 11.1 percent versus BAT 24.0 percent). Therefore, based

on the above, we believe that VABOMERE™ represents a substantial clinical improvement.

In summary, we have determined that VABOMERE™ meets all of the criteria for approval of new technology add-on payments. Therefore, we approving new technology add-on payments for VABOMERE™ for FY 2019. We note that, the applicant did not request approval for the use of a unique ICD-10-PCS procedure code for VABOMERE™ for FY 2019. As a result, hospitals will be unable to uniquely identify the use of VABOMERE™ on an inpatient claim using the typical coding of an ICD-10-PCS procedure code. In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53352), with regard to the oral drug DIFICID™, we revised our policy to allow for the use of an alternative code set to identify oral medications where no inpatient procedure is associated for the purposes of new technology add-on payments. We established the use of a National Drug Code (NDC) as the alternative code set for this purpose and described our rationale for this particular code set. This change was effective for payments for discharges occurring on or after October 1, 2012. We acknowledge that VABOMERE™ is not an oral drug and is administered by IV infusion, but it is the first approved new technology aside from an oral drug with no uniquely assigned inpatient procedure code. We, therefore, believe that the circumstances with respect to the identification of eligible cases using VABOMERE™ are similar to those addressed in the FY 2013 IPPS/LTCH PPS final rule with regard to DIFICID™ because we do not have current ICD-10-PCS code(s) to uniquely identify the use of VABOMERE™ to make the new technology add-on payment. Because we have determined that VABOMERE™ has met all of the

new technology add-on payment criteria and cases involving the use of VABOMERE™ will be eligible for such payments for FY 2019, we need to use an alternative coding method to identify these cases and make the new technology add-on payment for use of VABOMERE™ in FY 2019. Therefore, similar to the policy in the FY 2013 IPPS/LTCH PPS final rule, in the place of an ICD-10-PCS procedure code, FY 2019 cases involving the use of VABOMERE™ that are eligible for the FY 2019 new technology add-on payments will be identified by the NDC of 65293-009-01 (VABOMERE™ Meropenem-Vaborbactam Vial). Providers must code the NDC in data element LIN03 of the 837i Health Care Claim Institutional form in order to receive the new technology add-on payment for procedures involving the use of VABOMERE™. The applicant may request approval for a unique ICD-10-PCS procedure code for FY 2020.

As discussed above, according to the applicant, the cost of VABOMERE™ is \$165 per vial. A patient receives two vials per dose and three doses per day. Therefore, the per-day cost of VABOMERE™ is \$990 per patient. The duration of therapy, consistent with the Prescribing Information, is up to 14 days. Therefore, the estimated cost of VABOMERE™ to the hospital, per patient, is \$13,860. Based on the limited data from the product's launch, approximately 80 percent of VABOMERE™'s usage would be in the inpatient hospital setting, and approximately 20 percent of VABOMERE™'s usage may take place outside of the inpatient hospital setting. Therefore, the average number of days of VABOMERE™ administration in the inpatient hospital setting is estimated at 80 percent of 14 days, or approximately 11.2 days. As a result, the total inpatient cost for VABOMERE™ is \$11,088 ( $\$990 * 11.2$  days). Under § 412.88(a)(2), we limit new

technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case.

As a result, the maximum new technology add-on payment for a case involving the use of VABOMERE™ is \$5,544 for FY 2019.

d. remedē® System

Respicardia, Inc. submitted an application for new technology add-on payments for the remedē® System for FY 2019. According to the applicant, the remedē® System is indicated for use as a transvenous phrenic nerve stimulator in the treatment of adult patients who have been diagnosed with moderate to severe central sleep apnea. The remedē® System consists of an implantable pulse generator, and a stimulation and sensing lead. The pulse generator is placed under the skin, in either the right or left side of the chest, and it functions to monitor the patient's respiratory signals. A transvenous lead for unilateral stimulation of the phrenic nerve is placed either in the left pericardiophrenic vein or the right brachiocephalic vein, and a second lead to sense respiration is placed in the azygos vein. Both leads, in combination with the pulse generator, function to sense respiration and, when appropriate, generate an electrical stimulation to the left or right phrenic nerve to restore regular breathing patterns.

The applicant describes central sleep apnea (CSA) as a chronic respiratory disorder characterized by fluctuations in respiratory drive, resulting in the cessation of respiratory muscle activity and airflow during sleep.<sup>92</sup> The applicant reported that CSA,

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<sup>92</sup> Jagielski, D., Ponikowski, P., Augostini, R., Kolodziej, A., Khayat, R., Abraham, W. T., 2016, "Transvenous Stimulation of the Phrenic Nerve for the Treatment of Central Sleep Apnoea: 12 months' experience with the remedē®system," *European Journal of Heart Failure*, pp. 1-8.

as a primary disease, has a low prevalence in the United States population; and it is more likely to occur in those individuals who have cardiovascular disease, heart failure, atrial fibrillation, stroke, or chronic opioid usage. The apneic episodes which occur in patients with CSA cause hypoxia, increased blood pressure, increased preload and afterload, and promotes myocardial ischemia and arrhythmias. In addition, CSA “enhances oxidative stress, causing endothelial dysfunction, inflammation, and activation of neurohormonal systems, which contribute to progression of underlying diseases.”<sup>93</sup>

According to the applicant, prior to the introduction of the remedē<sup>®</sup> System, typical treatments for CSA took the form of positive airway pressure devices. Positive airway pressure devices, such as continuous positive airway pressure (CPAP), have previously been used to treat patients diagnosed with obstructive sleep apnea. Positive airway devices deliver constant pressurized air via a mask worn over the mouth and nose, or nose alone. For this reason, positive airway devices may only function when the patient wears the necessary mask. Similar to CPAP, adaptive servo-ventilation (ASV) provides noninvasive respiratory assistance with expiratory positive airway pressure. However, ASV adds servo-controlled inspiratory pressure, as well, in an effort to maintain airway patency.<sup>94</sup>

On October 6, 2017, the remedē<sup>®</sup> System was approved by the FDA as an implantable phrenic nerve stimulator indicated for the use in the treatment of adult

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<sup>93</sup> Costanzo, M. R., Ponikowski, P., Javaheri, S., Augostini, R., Goldberg, L., Holcomb, R., Abraham, W. T., “Transvenous Neurostimulation for Central Sleep Apnoea: A randomised controlled trial,” *Lancet*, 2016, vol. 388, pp. 974-982.

<sup>94</sup> Cowie, M. R., Woehrle, H., Wegscheider, K., Andergmann, C., d'Ortho, M.P., Erdmann, E., Teschler, H., “Adaptive Servo-Ventilation for Central Sleep Apnea in Systolic Heart Failure,” *N Eng Jour of Med*, 2015, pp. 1-11.

patients who have been diagnosed with moderate to severe CSA. The device was available commercially upon FDA approval. Therefore, the newness period for the remedē<sup>®</sup> System is considered to begin on October 6, 2017. The applicant has indicated that the device also is designed to restore regular breathing patterns in the treatment of CSA in patients who also have been diagnosed with heart failure.

The applicant was approved for two unique ICD-10-PCS procedure codes for the placement of the leads: 05H33MZ (Insertion of neurostimulator lead into right innominate (brachiocephalic) vein) and 05H03MZ (Insertion of neurostimulator lead into azygos vein), effective October 1, 2016. The applicant indicated that implantation of the pulse generator is currently reported using ICD-10-PCS procedure code 0JH60DZ (Insertion of multiple array stimulator generator into chest subcutaneous tissue).

As discussed above, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for the purposes of new technology add-on payments.

As stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20309), with regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, according to the applicant, the remedē<sup>®</sup> System provides stimulation to nerves to stimulate breathing. Typical treatments for hyperventilation CSA include supplemental oxygen and CPAP. Mechanical ventilation also has been used to maintain a patent airway. The applicant asserted that the remedē<sup>®</sup> System is a neurostimulation device resulting in negative airway pressure, whereas devices such as CPAP and ASV utilize positive airway pressure.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, the applicant stated that the remedē<sup>®</sup> System is assigned to MS-DRGs 040 (Peripheral, Cranial Nerve and Other Nervous System Procedures with MCC), 041 (Peripheral, Cranial Nerve and Other Nervous System Procedures with CC or Peripheral Neurostimulator), and 042 (Peripheral, Cranial Nerve and Other Nervous System Procedures without CC/MCC). The current procedures for the treatment options of CPAP and ASV are not assigned to these MS-DRGs.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, according to the applicant, the remedē<sup>®</sup> System is indicated for the use as a transvenous unilateral phrenic nerve stimulator in the treatment of adult patients who have been diagnosed with moderate to severe CSA. The applicant stated that the remedē<sup>®</sup> System reduces the negative symptoms associated with CSA, particularly among patients who have been diagnosed with heart failure. The applicant asserted that patients who have been diagnosed with heart failure are particularly negatively affected by CSA and currently available CSA treatment options of CPAP and ASV. According to the applicant, the currently available treatment options, CPAP and ASV, have been found to have worsened mortality and morbidity outcomes for patients who have been diagnosed with both CSA and heart failure. Specifically, ASV is currently contraindicated in the treatment of CSA in patients who have been diagnosed with heart failure.

The applicant also suggested that the remedē<sup>®</sup> System is particularly suited for the treatment of CSA in patients who also have been diagnosed with heart failure. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20310), we stated we were concerned that, while the remedē<sup>®</sup> System may be beneficial to patients who have been diagnosed with both CSA and heart failure, the FDA-approved indication is for use in the treatment of adult patients who have been diagnosed with moderate to severe CSA. We noted that the applicant's clinical analyses and data results related to patients who specifically were diagnosed with CSA and heart failure. We invited public comments on whether the remedē<sup>®</sup> System meets the newness criterion.

Comment: The applicant stated that the remedē<sup>®</sup> System uses a different mechanism of action because neurostimulation of the phrenic nerve to treat patients who have been diagnosed with CSA is a new concept, both, in terms of its mechanism of action and approach. The applicant explained that utilizing small electrical pulses delivered to the phrenic nerve via a transvenous lead helps restore a more normal breathing pattern and indicated that there are no other FDA-approved CSA therapies that either utilize transvenous neurostimulation or generate negative pressure to treat patients who have been diagnosed with CSA.

The applicant explained that currently, cases representing Medicare patients who have been admitted to the hospital with a diagnosis of CSA to receive treatment map to a wide array of MS-DRGs. However, the applicant believed that cases representing patients eligible for treatment involving the remedē<sup>®</sup> System would be assigned to a different MS-DRG than cases representing patients treated using standard treatment

options, including CPAP or ASV. The applicant further explained that, based on an analysis of FY 2018 MedPAR data, claims including a diagnosis of CSA mapped to 458 MS-DRGs with no single MS-DRG representing more than 4.5 percent of the total claims. The applicant believed this variant assignment of cases representing patients who have been diagnosed with CSA and received treatment is likely due to the fact that the vast majority of claims in the MedPAR data included the CSA diagnosis as a secondary or tertiary diagnosis reported on the claim. The applicant indicated that cases representing patients receiving treatment involving the remedē<sup>®</sup> System with CSA as a primary diagnosis would typically be assigned to MS-DRGs 040 or 041.

Several other commenters also supported approval of new technology add-on payments for the remedē<sup>®</sup> System, and asserted that the neurostimulation of the phrenic nerve is a different mechanism of action. The commenters indicated that they believed positive airway pressure (PAP) treatment is inferior to phrenic nerve stimulation because of patient intolerability, a lack of evidence in support of the success of PAP treatment in this population, or evidence showing that PAP such as ASV being contraindicated in the treatment of patients who have been diagnosed with CSA and heart failure. Another commenter agreed with the applicant, and stated that the remedē<sup>®</sup> System's mechanism of action to deliver treatment, the neurostimulation of the phrenic nerve, is a new treatment approach that has never previously been used.

Response: We appreciate the commenters' support and the applicant's further analysis and explanation regarding why the remedē<sup>®</sup> System is not substantially similar to other currently available treatment options, as well as the input provided by the

commenters. Based on review of the comments, we agree that utilization of the neurostimulation of the phrenic nerve, as performed by the remedē<sup>®</sup> System, is a different mechanism of action and that cases representing patients receiving treatment involving the use of the remedē<sup>®</sup> System would be assigned to a different MS-DRG than currently available treatment options. Therefore, we believe that the remedē<sup>®</sup> System is not substantially similar to any other existing technology. We also note that the applicant provided additional information regarding patients who have been diagnosed with CSA, without a diagnosis of heart failure, and we considered this additional information in our evaluation of the application.

After consideration of the public comments we received, for the reasons discussed, we believe that the remedē<sup>®</sup> System is not substantially similar to any existing technology and it meets the newness criterion.

Comment: The applicant stated that the remedē<sup>®</sup> received FDA approval on October 6, 2017. However, the applicant noted that the first implant procedure was completed on February 01, 2018. Therefore, the applicant believed that the newness period should begin on February 01, 2018, rather than the FDA approval date.

Response: As we discuss in section II.H.4. and in our discussion of Voraxaze included in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53348), generally, our policy is to begin the newness period on the date of FDA approval or clearance or, if later, the date of availability of the product on the U.S. market. However, the applicant did not provide additional information to explain why there was a delay from the time of FDA approval until the completion of the first implant procedure to establish a different date of

availability. Without additional information, we continue to believe that the newness period for the remedē<sup>®</sup> System begins on October 6, 2017. We may consider any further information that may be provided regarding the date of availability in future rulemaking.

With regard to the cost criterion, the applicant provided the following analysis to demonstrate that the technology meets the cost criterion. The applicant identified cases representing potential patients who may be eligible for treatment involving the remedē<sup>®</sup> System within MS-DRGs 040, 041, and 042. Using the Standard Analytical File (SAF) Limited Data Set (MedPAR) for FY 2015, the applicant included all claims for the previously stated MS-DRGs for its cost threshold calculation. The applicant stated that typically claims are selected based on specific ICD-10-PCS parameters, however this is a new technology for which no ICD-10-PCS procedure code and ICD-10-CM diagnosis code combination exists. Therefore, all claims for the selected MS-DRGs were included in the cost threshold analysis. This process resulted in 4,462 cases representing potential patients who may be eligible for treatment involving the remedē<sup>®</sup> System assigned to MS-DRG 040; 5,309 cases representing potential patients who may be eligible for treatment involving the remedē<sup>®</sup> System assigned to MS-DRG 041; and 2,178 cases representing potential patients who may be eligible for treatment involving the remedē<sup>®</sup> System assigned to MS-DRG 042, for a total of 11,949 cases.

Using the 11,949 identified cases, the applicant determined that the average unstandardized case-weighted charge per case was \$85,357. Using the FY 2015 MedPAR dataset to identify the total mean charges for revenue code 0278, the applicant removed charges associated with the current treatment options for each MS-DRG as

follows: \$9,153.83 for MS-DRG 040; \$12,762.31 for MS-DRG 041; and \$21,547.73 for MS-DRG 042. The applicant anticipated that no other related charges would be eliminated or replaced. The applicant then standardized the charges and applied a 2-year inflation factor of 1.104055 obtained from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38524). The applicant then added charges for the new technology to the inflated average case-weighted standardized charges per case. No other related charges were added to the cases. The applicant calculated a final inflated average case-weighted standardized charge per case of \$175,329 and a Table 10 average case-weighted threshold amount of \$78,399. Because the final inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount, the applicant maintained that the technology met the cost criterion. With regard to the analysis above, in the proposed rule, we stated that we were concerned that all cases in MS-DRGs 040, 041, and 042 were used in the analysis. We further stated that we were unsure if all of these cases represent patients that may be truly eligible for treatment involving the remedē<sup>®</sup> System. We invited public comments on whether the remedē<sup>®</sup> System meets the cost criterion.

Comment: In response to our concern presented in the FY 2019 IPPS/LTCH PPS proposed rule, the applicant submitted a revised analysis with regard to the cost criterion. In its revised cost calculations, the applicant searched the FY 2016 MedPAR data for cases reporting an ICD-10-CM procedure code for the insertion of an array stimulator generator, in combination with a neurostimulator lead. Below is a table listing the codes searched by the applicant.

<b>ICD-10-PCS Code</b>	<b>Description (Array Stimulator Generator)</b>
0JH60BZ	INSERTION 1 ARRAY STIM GEN CHEST SUBQ TISS FASC OPEN
0JH60CZ	INSERTION 1 ARRAY RCHG STIM GEN CHST SUBQ FASCIA OPN
0JH60DZ	INSERTION MX ARRAY STIM GEN CHST SUBQ TISS FASC OPEN
0JH60EZ	INSERTION MX ARRAY RCHG STIM GEN CHST SUBQ FASC OPEN
0JH63BZ	INSERTION 1 ARRAY STIM GEN CHEST SUBQ FASCIA PERQ
0JH63CZ	INSERTION 1 ARRAY RCHG STIM GEN CHST SUBQ FASC PERQ
0JH63DZ	INSERTION MX ARRAY STIM GEN CHEST SUBQ FASCIA PERQ
0JH63EZ	INSERTION MX ARRAY RCHG STIM GEN CHST SUBQ FASC PERQ
0JH70BZ	INSERTION 1 ARRAY STIM GEN BACK SUBQ TISS FASC OPEN
0JH70CZ	INSERTION 1 ARRAY RCHG STIM GEN BACK SUBQ FASC OPEN
0JH70DZ	INSERTION MX ARRAY STIM GEN BACK SUBQ TISS FASC OPEN
0JH70EZ	INSERTION MX ARRAY RCHG STIM GEN BACK SUBQ FASC OPEN
0JH73BZ	INSERTION 1 ARRAY STIM GEN BACK SUBQ TISS FASC PERQ
0JH73CZ	INSERTION 1 ARRAY RCHG STIM GEN BACK SUBQ FASC PERQ
0JH73DZ	INSERTION MX ARRAY STIM GEN BACK SUBQ TISS FASC PERQ
0JH73EZ	INSERTION MX ARRAY RCHG STIM GEN BACK SUBQ FASC PERQ
0JH80BZ	INSERTION 1 ARRAY STIM GEN ABDOMEN SUBQ FASCIA OPEN
0JH80CZ	INSERTION 1 ARRAY RCHG STIM GEN ABDOMN SUBQ FASC OPN
0JH80DZ	INSERTION MX ARRAY STIM GEN ABDOMN SUBQ FASCIA OPEN
0JH80EZ	INSERTION MX ARRAY RCHG STIM GEN ABDMN SUBQ FASC OPN

<b>ICD-10-PCS Code</b>	<b>Description (Array Stimulator Generator)</b>
0JH83BZ	INSERTION 1 ARRAY STIM GEN ABDOMEN SUBQ FASCIA PERQ
0JH83CZ	INSERTION 1 ARRAY RCHRG STIM GEN ABDOMN SUBQ FASC PC
0JH83DZ	INSERTION MX ARRAY STIM GEN ABDOMN SUBQ FASCIA PERQ
0JH83EZ	INSERTION MX ARRAY RCHRG STIM GEN ABDMN SUBQ FASC PC
<b>ICD-10-PCS Code</b>	<b>Description (Neurostimulator Lead)</b>
00HE0MZ	INSERTION NEURSTIM LEAD CRANIAL NERVE OPEN
00HE3MZ	INSERTION NEURSTIMULATOR LEAD CRANIAL NERVE PERQ
00HE4MZ	INSERTION NEURSTIMUL LEAD CRANIAL NERV PERQ ENDO
01HY0MZ	INSERTION NEURSTIM LEAD PERIPHERAL NERVE OPEN
01HY3MZ	INSERTION NEURSTIMULT LEAD PERIPHERAL NERVE PERQ
01HY4MZ	INSERTION NEURSTIM LEAD PERIPH NERVE PERQ ENDO APPR
05H00MZ	INSERTION NEUROSTIMULATOR LEAD IN AZYGOS VEIN OP
05H03MZ	INSERTION NEUROSTIMULATOR LEAD IN AZYGOS VEIN PQ
05H04MZ	INSERTION NEURSTIM LEAD INTO AZYGOS VEIN PQ ENDO
05H30MZ	INSERTION NEUROSTIMULATOR LEAD IN RT INNOMIN VEIN OPN
05H33MZ	INSERTION NEURSTIM LEAD IN RT INNOMIN VEIN PERQ
05H34MZ	INSERTION NEURSTIM LEAD RT INNOMINATE VEIN PERQ ENDO
05H40MZ	INSERTION NEUROSTIMULATOR LEAD LT INNOMIN VEIN OP
05H43MZ	INSERTION NEUROSTIMULATOR LEAD LT INNOMINATE VEIN PQ
05H44MZ	INSERTION NEURSTIM LEAD IN LT INNOMIN VEIN PQ END

<b>ICD-10-PCS Code</b>	<b>Description (Array Stimulator Generator)</b>
0DH60MZ	INSERTION STIMULATOR LEAD STOMACH OPEN APPROACH
0DH63MZ	INSERTION STIMULATOR LEAD STOMACH PERCUTANEOUS
0DH64MZ	INSERTION STIM LEAD STOMACH PERQ ENDO APPRCH

The applicant identified a total of 2,416 cases representing potential patients who may be eligible for treatment involving the remedē<sup>®</sup> System, with 1,762 cases (72.9 percent of all of the cases) mapping to MS-DRG 41 and 654 cases (27.1 percent of all of the cases) mapping to MS-DRG 42, resulting in an average case-weighted charge per case of \$86,744. The applicant removed 100 percent of the charges associated with the services provided in connection with the prior technology. The applicant then standardized the charges and inflated the charges by an inflation factor of 9.36 percent, which resulted in an inflated average case-weighted standardized charge per case of \$61,426. According to the applicant, the cost of the remedē<sup>®</sup> System is \$34,500. The applicant converted the costs of the technology to charges by dividing the costs by the national CCR of 0.332 for “Implantable Devices” from the FY 2018 IPPS/LTCH PPS final rule. This resulted in \$103,916 in estimated hospital charges for the new technology, which were added to the inflated standardized charges per case. The final inflated average case-weighted standardized charge per case is \$165,342, which is \$87,877 more than the Table 10 average case-weighted threshold amount of \$77,465. Therefore, the applicant maintained that it meets the cost criterion.

Response: We appreciate the applicant's submission of revised cost calculations in response to our concerns.

After consideration of the additional information provided by the applicant, we agree that the remedē<sup>®</sup> System meets the cost criterion.

With respect to the substantial clinical improvement criterion, the applicant asserted that the remedē<sup>®</sup> System meets the substantial clinical improvement criterion. The applicant stated that the remedē<sup>®</sup> System offers a treatment option for a patient population unresponsive to, or ineligible for, treatment involving currently available options. According to the applicant, patients who have been diagnosed with CSA have no other available treatment options than the remedē<sup>®</sup> System. The applicant stated that published studies on both CPAP and ASV have proven that primary endpoints have not been met for treating patients who have been diagnosed with CSA. In addition, according to the ASV study, there was an increase in cardiovascular mortality.

According to the applicant, the remedē<sup>®</sup> System will prove to be a better treatment for the negative effects associated with CSA in patients who have been diagnosed with heart failure, such as cardiovascular insults resulting from sympathetic nervous system activation, pulmonary hypertension, and arrhythmias, which ultimately contribute to the downward cycle of heart failure<sup>95</sup>, when compared to the currently available treatment options. The applicant also indicated that prior studies have assessed

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<sup>95</sup> Abraham, W., Jagielski, D., Oldenburg, O., Augostini, R., Kreuger, S., Kolodziej, A., Ponikowski, P., "Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnea," *JACC: Heart Failure*, 2015, vol. 3(5), pp. 360-369.

CPAP and ASV as options for the treatment of diagnoses of CSA primarily in patients who have been diagnosed with heart failure.

The applicant shared the results from two studies concerning the effects of positive airway pressure ventilation treatment:

- The Canadian Continuous Positive Airway Pressure for Patients with Central Sleep Apnea and Heart Failure trial found that, while CPAP managed the negative symptoms of CSA, such as improved nocturnal oxygenation, increased ejection fraction, lower norepinephrine levels, and increased walking distance, it did not affect overall patient survival<sup>96</sup>; and
- In a randomized trial of 1,325 patients who had been diagnosed with heart failure who received treatment with ASV plus standard treatment or standard treatment alone, ASV was found to increase all-cause and cardiovascular mortality as compared to the control treatment.<sup>97</sup>

The applicant also stated that published literature indicates that currently available treatment options do not meet primary endpoints with concern to the treatment of CSA; patients treated with ASV experienced an increased likelihood of mortality,<sup>98</sup> and patients treated with CPAP experienced alleviation of symptoms, but no change in survival.<sup>99</sup> The

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<sup>96</sup> Bradley, T. D., Logan, A. G., Kimoff, R. J., Series, F., Morrison, D., Ferguson, K., Phil, D., 2005, "Continuous Positive Airway Pressure for Central Sleep Apnea and Heart Failure," *N Eng Jour of Med*, vol. 353(19), pp. 2025-2033.

<sup>97</sup> Cowie, M. R., Woehrle, H., Wegscheider, K., Andergmann, C., d'Ortho, M.-P., Erdmann, E., Teschler, H., "Adaptive Servo-Ventilation for Central Sleep Apnea in Systolic Heart Failure," *N Eng Jour of Med*, 2015, pp. 1-11.

<sup>98</sup> Ibid.

<sup>99</sup> Bradley, T. D., Logan, A. G., Kimoff, R. J., Series, F., Morrison, D., Ferguson, K., Phil, D., 2005, "Continuous Positive Airway Pressure for Central Sleep Apnea and Heart Failure," *N Engl Jour of Med*, vol. 353(19), pp. 2025-2033.

applicant provided further research, which suggested that a primary drawback of CPAP in the treatment of diagnoses of CSA is a lack of patient adherence to therapy.<sup>100</sup>

The applicant also stated that the remedē<sup>®</sup> System represents a substantial clinical improvement over existing technologies because of the reduction in the number of future hospitalizations, few device-related complications, and improvement in CSA symptoms and quality of life. Specifically, the applicant stated that the clinical data has shown a statistically significant reduction in Apnea-hypopnea index (AHI), improvement in quality of life, and significantly improved Minnesota Living with Heart Failure Questionnaire score. In addition, the applicant indicated that study results showed the remedē<sup>®</sup> System demonstrated an acceptable safety profile, and there was a trend toward fewer heart failure hospitalizations.

The applicant provided six published articles as evidence. All six articles were prospective studies. In three of the six studies, the majority of patients studied had been diagnosed with CSA with a heart failure comorbidity, while the remaining three studies only studied patients who had been diagnosed with CSA with a heart failure comorbidity. The first study<sup>101</sup> assessed the treatment of patients who had been diagnosed with CSA in addition to heart failure. According to the applicant, as referenced in the results of the published study, Ponikowski, et al., assessed the treatment effects of 16 of 31 enrolled patients with evidence of CSA within 6 months prior to enrollment who met inclusion

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<sup>100</sup> Ponikowski, P., Javaheri, S., Michalkiewicz, D., Bart, B. A., Czarnecka, D., Jastrzebski, M., Abraham, W. T., "Transvenous Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnoea in Heart Failure," *European Heart Journal*, 2012, vol. 33, pp. 889-894.

<sup>101</sup> Ponikowski, P., Javaheri, S., Michalkiewicz, D., Bart, B. A., Czarnecka, D., Jastrzebski, M., Abraham, W. T., "Transvenous Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnoea in Heart Failure," *European Heart Journal*, 2012, vol. 33, pp. 889-894.

criteria (apnea-hypopnea index of greater than or equal to 15 and a central apnea index of greater than or equal to 5) and who did not meet exclusion criteria (a baseline oxygen saturation of less than 90 percent, being on supplemental oxygen, having evidence of phrenic nerve palsy, having had severe chronic obstructive pulmonary disease (COPD), having hard angina or a myocardial infarction in the past 3 months, being pacemaker dependent, or having inadequate capture of the phrenic nerve during neurostimulation). Of the 16 patients whose treatment was assessed, all had various classifications of heart failure diagnoses: 3 (18.8 percent) were classified as class I on the New York Heart Association classification scale (No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath)); 8 (50 percent) were classified as a class II (Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath)); and 5 (31.3 percent) were classified as class III (Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea).<sup>102</sup> After successful surgical implantation of a temporary transvenous lead for unilateral phrenic nerve stimulation, patients underwent a control night without nerve stimulation and a therapy night with stimulation, while undergoing polysomnographic (PSG) testing. Comparison of both nights was performed.

According to the applicant, some improvements of CSA symptoms were identified in statistical analyses. Sleep time and efficacy were not statistically

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<sup>102</sup> American Heart Association: "Classes of Heart Failure," May 8, 2017. Available at: [http://www.heart.org/HEARTORG/Conditions/HeartFailure/AboutHeartFailure/Classes-of-Heart-Failure\\_UCM\\_306328\\_Article.jsp#.WmE2rIWnGUK](http://www.heart.org/HEARTORG/Conditions/HeartFailure/AboutHeartFailure/Classes-of-Heart-Failure_UCM_306328_Article.jsp#.WmE2rIWnGUK).

significantly different for control night and therapy night, with median sleep times of 236 minutes and 245 minutes and sleep efficacy of 78 percent and 71 percent, respectively. There were no statistical differences across categorical time spent in each sleep stage (for example, N1, N2, N3, and REM) between control and therapy nights. The average respiratory rate and hypopnea index did not differ statistically across nights. Marginal positive statistical differences occurred between control and therapy nights for the baseline oxygen saturation median values (95 and 96 respectively) and obstructive apnea index (OAI) (1 and 4, respectively). Beneficial statistically significant differences occurred from control to therapy nights for the average heart rate (71 to 70, respectively), arousal index events per hour (32 to 12, respectively), apnea-hypopnea index (AHI) (45 to 23, respectively), central apnea index (CAI) (27 to 1, respectively), and oxygen desaturation index of 4 percent (ODI = 4 percent) (31 to 14, respectively). Two adverse events were noted: (1) lead tip thrombus noted when lead was removed; the patient was anticoagulated without central nervous system sequelae; and (2) an episode of ventricular tachycardia upon lead placement and before stimulation was initiated. The episode was successfully treated by defibrillation of the patient's implanted ICD. Neither adverse event was directly related to the phrenic nerve stimulation therapy.

The second study<sup>103</sup> was a prospective, multi-center, nonrandomized study that followed patients diagnosed with CSA and other underlying comorbidities. According to the applicant, as referenced in the results of the published study, Abraham, et al., 49 of

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<sup>103</sup> Abraham, W., Jagielski, D., Oldenburg, O., Augostini, R., Kreuger, S., Kolodziej, A., Ponikowski, P., "Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnea," *JACC: Heart Failure*, 2015, vol. 3(5), pp. 360-369.

the 57 enrolled patients who were followed indicated a primary endpoint of a reduction of AHI with secondary endpoints of feasibility and safety of the therapy. Patients were included if they had an AHI of 20 or greater and apneic events that were related to CSA. Among the study patient population, 79 percent had diagnoses of heart failure, 2 percent had diagnoses of atrial fibrillation, 13 percent had other cardiac etiology diagnoses, and the remainder of patients had other cardiac unrelated etiology diagnoses. Exclusion criteria were similar to the previous study (that is, (Ponikowski P., 2012)), with the addition of a creatinine of greater than 2.5 mg/dl. After implantation of the remedē<sup>®</sup> System, patients were assessed at baseline, 3 months (n=47) and 6 months (n=44) on relevant measures. At 3 months, statistically nonsignificant results occurred for the OAI and hypopnea index (HI) measures. The remainder of the measures showed statistically significant differences from baseline to 3 months: AHI with a -27.1 episodes per hour of sleep difference; CAI with a -23.4 episodes per hour of sleep difference; MAI with a -3 episodes per hour of sleep difference; ODI = 4 percent with a -23.7 difference; arousal index with -12.5 episodes per hour of sleep difference; sleep efficiency with a 8.4 percent increase; and REM sleep with a 4.5 percent increase. Similarly, among those assessed at 6 months, statistically significant improvements on all measures were achieved, including OAI and HI. Regarding safety, a data safety monitoring board (DSMB) adjudicated and found the following 3 of 47 patients (6 percent) as having serious adverse events (SAE) related to the device, implantation procedure or therapy. None of the DSMB adjudicated SAEs was due to lead dislodgement. Two SAEs of hematoma or headache were related to the implantation procedure and occurred as single events in two patients. A single

patient experienced atypical chest discomfort during the first night of stimulation, but on reinitiation of therapy on the second night no further discomfort occurred.

The third study<sup>104</sup> assessed the safety and feasibility of phrenic nerve stimulation for 6 monthly follow-ups of 8 patients diagnosed with heart failure with CSA. Of the eight patients assessed, one was lost to follow-up and one died from pneumonia. According to the applicant, as referenced in the results in the published study, Zheng, et al. (2015), no unanticipated serious adverse events were found to be related to the therapy; in one patient, a lead became dislodged and subsequently successfully repositioned. Three patients reported improved sleep quality, and all patients reported increased energy. A reduction in sleep apneic events and decreases in AHI and CAI were related to application of the treatment. Gradual increases to the 6-minute walking time occurred through the study.

The fourth study<sup>105</sup> extended the previous Phase I study<sup>106</sup> from 6 months to 12 months, and included only 41 of the original 49 patients continuing in the study. Of the 57 patients enrolled at the time of the Phase I study, 41 were evaluated at the 12-month follow-up. Of the 41 patients examined at 12 months, 78 percent had diagnoses of CSA related to heart failure, 2 percent had diagnoses of atrial fibrillation with related CSA, 12 percent had diagnoses of CSA related to other cardiac etiology diagnoses, and the

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<sup>104</sup> Zhang, X., Ding, N., Ni, B., Yang, B., Wang, H., & Zhang, S.J., "Safety and Feasibility of Chronic Transvenous Phrenic Nerve Stimulation for Treatment of Central Sleep Apnea in Heart Failure Patients," *The Clinical Respiratory Journal*, 2015, pp. 1-9.

<sup>105</sup> Jagielski, D., Ponikowski, P., Augostini, R., Kolodziej, A., Khayat, R., & Abraham, W. T., "Transvenous Stimulation of the Phrenic Nerve for the Treatment of Central Sleep Apnoea: 12 months' experience with the remede®system," *European Journal of Heart Failure*, 2016, pp. 1-8.

<sup>106</sup> Abraham, W., Jagielski, D., Oldenburg, O., Augostini, R., Kreuger, S., Kolodziej, A., Ponikowski, P., 2015, "Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnea," *JACC: Heart Failure*, 2015, vol. 3(5), pp. 360-369.

remainder of patients had diagnoses of CSA related to other noncardiac etiology diagnoses. At 12 months, 6 sleep parameters remained statistically different and 3 were no longer statistically significant. The HI, OAI, and arousal indexes were no longer statistically significantly different from baseline values. A new parameter, time spent with peripheral capillary oxygen saturation (SpO<sub>2</sub>) below 90 percent was not statistically different at 12 months (31.4 minutes) compared to baseline (38.2 minutes). The remaining 6 parameters showed maintenance of improvements at the 12-month time point as compared to the baseline: AHI from 49.9 to 27.5 events per hour; CAI from 28.2 to 6.0 events per hour; MAI from 3.0 to 0.5 events per hour; ODI = 4 percent from 46.1 to 26.9 events per hour; sleep efficiency from 69.3 percent to 75.6 percent; and REM sleep from 11.4 percent to 17.1 percent. At the 3-month, 6-month, and 12-month time points, patient quality of life was assessed to be 70.8 percent, 75.6 percent, and 83.0 percent, respectively, indicating that patients experienced mild, moderate, or marked improvement. Seventeen patients were followed at 18 months with statistical differences from baseline for AHI and CAI. Three patients died over the 12-month follow-up period: 2 died of end-stage heart failure and 1 died from sudden cardiac death. All three deaths were adjudicated by the DSMB and none were related to the procedure or to phrenic nerve stimulation therapy. Five patients were found to have related serious adverse events over the 12-month study time. Three events were previously described in the results referenced in the published study, Abraham, et al., and an additional 2 SAEs occurred during the 12-month follow-up. One patient experienced impending pocket perforation resulting in pocket revision, and another patient experienced lead failure.

The fifth study<sup>107</sup> was a randomized control trial with a primary outcome of achieving a reduction in AHI of 50 percent or greater from baseline to 6 months enrolling 151 patients with the neurostimulation treatment (n=73) and no stimulation control (n=78). Of the total sample, 96 (64 percent) of the patients had been diagnosed with heart failure; 48 (66 percent) of the treated patients had been diagnosed with heart failure, and 48 (62 percent) of the control patients had been diagnosed with heart failure. Sixty-four (42 percent) of all of the patients included in the study had been diagnosed with atrial fibrillation and 84 (56 percent) had been diagnosed with coronary artery disease. All of the patients had been treated with the *remedē*<sup>®</sup> System device implanted; the system was activated in the treatment group during the first month. “Over about 12 weeks, stimulation was gradually increased in the treatment group until diaphragmatic capture was consistently achieved without disrupting sleep.”<sup>108</sup> While patients and physicians were unblinded, the polysomnography core laboratory remained blinded. The per-protocol population from which statistical comparisons were made is 58 patients treated with the *remedē*<sup>®</sup> System and 73 patients in the control group. The authors appropriately controlled for Type I errors (false positives), which arise from performing multiple tests. Thirty-five treated patients and 8 control patients met the primary end point, the number of patients with a 50 percent or greater reduction in AHI from baseline; the difference of 41 percent is statistically significant. All seven of the secondary endpoints were assessed and found to have statistically significant difference in change

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<sup>107</sup> Costanzo, M. R., Ponikowski, P., Javaheri, S., Augostini, R., Goldberg, L., Holcomb, R., Abraham, W. T., “Transvenous Neurostimulation for Central Sleep Apnoea: A randomised controlled trial,” *Lancet*, 2016, vol. 388, pp. 974-982.

<sup>108</sup> *Ibid.*

from baseline between groups at the 6-month follow-up after controlling for multiple comparisons: CAI of -22.8 events per hour lower for the treatment group; AHI (continuous) of -25.0 events per hour lower for the treatment group; arousal events per hour of -15.2 lower for the treatment group; percent of sleep in REM of 2.4 percent higher for the treatment group; patients with marked or moderate improvement in patient global assessment was 55 percent higher in the treatment group; ODI = 4 percent was -22.7 events per hour lower for the treatment group; and the Epworth sleepiness scale was -3.7 lower for the treatment group. At 12 months, 138 (91 percent) of the patients were free from device, implant, and therapy related adverse events.

The final study data was from the pivotal study with limited information in the form of an abstract<sup>109</sup> and an executive summary<sup>110</sup>. The executive summary detailed an exploratory analysis of the 141 patients enrolled in the pivotal trial which were patients diagnosed with CSA. The abstract indicated that the 141 patients from the pivotal trial were randomized to either the treatment arm (68 patients) in which initiation of treatment began 1 month after implantation of the *remedē*<sup>®</sup> System device with a 6-month follow-up period, or to the control group arm (73 patients) in which the initiation of treatment with the *remedē*<sup>®</sup> System device was delayed for 6 months after implantation. Randomization efficacy was compared across baseline polysomnography and associated respiratory indices in which four of the five measures showed no statistical differences between those treated and controls; treated patients had an average MAI score of 3.1 as

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<sup>109</sup> Goldberg, L., Ponikowski, P., Javaheri, S., Augostini, R., McKane, S., Holcomb, R., Costanzo, M. R., "In Heart Failure Patients with Central Sleep Apnea, Transvenous Stimulation of the Phrenic Nerve Improves Sleep and Quality of Life," Heart Failure Society of America, 21st annual meeting, 2017.

<sup>110</sup> Respicardia, Inc. (n.d.). *Remede System Pivotal Trial*.  
<https://clinicaltrials.gov/ct2/show/NCT01816776>.

compared to control patients with an average MAI score of 2.2 (p=0.029). Patients included in the trial must have been medically stable, at least 18 years old, have had an electroencephalogram within 40 days of scheduled implantation, had an apnoea-hypopnoea index (AHI) of 20 events per hour or greater, a central apnoea index at least 50 percent of all apneas, and an obstructive apnea index less than or equal to 20 percent.<sup>111</sup> Primary exclusion criteria were CSA caused by pain medication, heart failure of state D from the American Heart Association, a new implantable cardioverter defibrillator, pacemaker dependent subjects without any physiologic escape rhythm, evidence of phrenic nerve palsy, documented history of psychosis or severe bipolar disorder, a cerebrovascular accident within 12 months of baseline testing, limited pulmonary function, baseline oxygen saturation less than 92 percent while awake and on room air, active infection, need for renal dialysis, or poor liver function.<sup>112</sup> Patients included in this trial were primarily male (89 percent), white (95 percent), with at least one comorbidity with cardiovascular conditions being most prevalent (heart failure at 64 percent), with a concomitant implantable cardiovascular stimulation device in 42 percent of patients at baseline. The applicant stated that, after randomization, there were no statistically significant differences between the treatment and control groups, with the exception of the treated group having a statistically higher rate of events per hour on the mixed apnea index (MAI) at baseline than the control group.

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<sup>111</sup> Respocardia, Inc. (n.d.). Remede System Pivotal Trial. <https://clinicaltrials.gov/ct2/show/NCT01816776>.

<sup>112</sup> Ibid.

The applicant asserted that the results from the pivotal trial<sup>113</sup> allow for the comparison of heart failure status in patients; we note that patients with American Heart Association objective assessment Class D (Objective evidence of severe cardiovascular disease. Severe limitations. Experiences symptoms even while at rest) were excluded from this pivotal trial. The primary endpoint in the pivotal trial was the proportion of patients with an AHI reduction greater than or equal to 50 percent at 6 months. When controlling for heart failure status, both treated groups experienced a statistically greater proportion of patients with AHI reductions than the controls at 6 months (58 percent more of treated patients with diagnoses of heart failure and 35 percent more of treated patients without diagnoses of heart failure as compared to their respective controls). The secondary endpoints assessed were the CAI average events per hour, AHI average events per hour, arousal index (ArI) average events per hour, percent of sleep in REM, and oxygen desaturation index 4 percent (ODI = 4 percent) average events per hour. Excluding the percent of sleep in REM, the treatment groups for both patients with diagnoses of heart failure and non-heart failure conditions experienced statistically greater improvements at 6 months on all secondary endpoints as compared to their respective controls. Lastly, quality of life secondary endpoints were assessed by the Epworth sleepiness scale (ESS) average scores and the patient global assessment (PGA). For both the ESS and PGA assessments, both treatment groups of patients with diagnoses of heart failure and non-heart failure conditions had statistically beneficial changes between baseline and 6 months as compared to their respective control groups.

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<sup>113</sup> Respocardia, Inc. (n.d.). Remede System Pivotal Trial. <https://clinicaltrials.gov/ct2/show/NCT01816776>.

The applicant provided analyses from the above report focusing on the primary and secondary polysomnography endpoints, specifically, across patients who had been diagnosed with CSA with heart failure and non-heart failure. Eighty patients included in the study from the executive summary report had comorbid heart failure, while 51 patients did not. Of those patients with heart failure, 35 were treated while 45 patients were controls. Of those patients without heart failure, 23 were treated and 28 patients were controls. The applicant did not provide baseline descriptive statistical comparisons between treated and control groups controlling for heart failure status. Across all primary and secondary endpoints, the patient group who were diagnosed with CSA and comorbid heart failure experienced statistically significant improvements. Excepting percent of sleep in REM, the patient group who were diagnosed with CSA without comorbid heart failure experienced statistically significant improvements in all primary and secondary endpoints. In the FY 2019 IPPS/LTCH PPS proposed rule, we invited public comments on whether this current study design is sufficient to support substantial clinical improvement of the remedē<sup>®</sup> System with respect to all patient populations, particularly the non-heart failure population.

As previously noted, the applicant also contends that the technology offers a treatment option for a patient population unresponsive to, or ineligible for, currently available treatment options. Specifically, the applicant stated that the remedē<sup>®</sup> System is the only treatment option for patients who have been diagnosed with moderate to severe CSA; published studies on positive pressure treatments like CPAP and ASV have not met primary endpoints; and there was an increase in cardiovascular mortality according to the

ASV study. According to the applicant, approximately 40 percent of patients who have been diagnosed with CSA have heart failure. The applicant asserted that the use of the remedē<sup>®</sup> System not only treats and improves the symptoms of CSA, but there is evidence of reverse remodeling in patients with reduced left ventricular ejection fraction (LVEF).

In the proposed rule we stated we were concerned that the remedē<sup>®</sup> System is not directly compared to the CPAP or ASV treatment options, which, to our understanding, are the current treatment options available for patients who have been diagnosed with CSA without heart failure. We noted that the FDA-approved indication for the implantation of the remedē<sup>®</sup> System is for use in the treatment of adult patients who have been diagnosed with moderate to severe CSA. We also noted that the applicant's supporting studies were directed primarily at patients who had been treated with the remedē<sup>®</sup> System who also had been diagnosed with heart failure. The applicant asserted that it would not be appropriate to use CPAP and ASV treatment options when comparing CPAP and ASV to the remedē<sup>®</sup> System in the patient population of heart failure diagnoses because these treatment options have been found to increase mortality outcomes in this population. In light of the limited length of time in which the remedē<sup>®</sup> System has been studied, we indicated we were concerned that any claims on mortality as they relate to treatment involving the use of the remedē<sup>®</sup> System may be limited. Therefore, we were concerned as to whether there is sufficient data to determine that the technology represents a substantial clinical improvement with respect to patients who have been diagnosed with CSA without heart failure.

We stated in the proposed rule that the applicant has shown that, among the subpopulation of patients who have been diagnosed with CSA and heart failure, the remedē<sup>®</sup> System decreases morbidity outcomes as compared to the CPAP and ASV treatment options. In the proposed rule, we noted that we understood that not all patients evaluated in the applicant's supporting clinical trials had been diagnosed with CSA with a comorbidity of heart failure. However, in all of the supporting studies for this application, the vast majority of study patients did have this specific comorbidity of CSA and heart failure. Of the three studies which enrolled both patients diagnosed with CSA with and without heart failure,<sup>114,115,116,117</sup> only two studies performed analyses controlling for heart failure status.<sup>118,119</sup> The data from these two studies, the Costanzo, et al. (2016) and the Respicardia, Inc. executive report, are analyses based on the same pivotal trial data and, therefore, do not provide results from two separate samples. Descriptive comparisons are made in the executive summary of the pivotal trial<sup>120</sup> between all treated and control patients. However, we were unable to determine the similarities and differences between patients with heart failure and non-heart failure treated versus

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<sup>114</sup> Respicardia, Inc. (n.d.). Remedē System Pivotal Trial.

<https://clinicaltrials.gov/ct2/show/NCT01816776>.

<sup>115</sup> Costanzo, M. R., Ponikowski, P., Javaheri, S., Augostini, R., Goldberg, L., Holcomb, R., Abraham, W. T., "Transvenous Neurostimulation for Central Sleep Apnoea: A randomised controlled trial," *Lancet*, 2016, vol. 388, pp. 974-982.

<sup>116</sup> Respicardia, Inc. (n.d.). Remedē System Pivotal Trial.

<https://clinicaltrials.gov/ct2/show/NCT01816776>.

<sup>117</sup> Jagielski, D., Ponikowski, P., Augostini, R., Kolodziej, A., Khayat, R., & Abraham, W. T., "Transvenous Stimulation of the Phrenic Nerve for the Treatment of Central Sleep Apnoea: 12 months' experience with the remedē@system," *European Journal of Heart Failure*, 2016, pp. 1-8.

<sup>118</sup> Respicardia, Inc. (n.d.). Remedē System Pivotal Trial.

<https://clinicaltrials.gov/ct2/show/NCT01816776>.

<sup>119</sup> Costanzo, M. R., Ponikowski, P., Javaheri, S., Augostini, R., Goldberg, L., Holcomb, R., Abraham, W. T., "Transvenous Neurostimulation for Central Sleep Apnoea: A randomised controlled trial," *Lancet*, 2016, vol. 388, pp. 974-982.

<sup>120</sup> Respicardia, Inc. (n.d.). Remedē System Pivotal Trial.

<https://clinicaltrials.gov/ct2/show/NCT01816776>.

controlled groups. Because randomization resulted in one difference between the overall treated and control groups (MAI events per hour), we stated that it is possible that further failures of randomization may have occurred when controlling for heart failure status in unmeasured variables. Finally, the sample size analyzed and the subsample sizes of the heart failure patients (80) and non-heart failure patients (51) are particularly small. We stated that it is possible that these results are not representative of the larger population of patients who have been diagnosed with CSA.

Therefore, in the proposed rule we stated we were concerned that differences in morbidity and mortality outcomes between CPAP, ASV, and the *remedē*<sup>®</sup> System in the general CSA patient population have not adequately been tested or compared.

Specifically, the two patient populations, those who have been diagnosed with heart failure and CSA versus those who have been diagnosed with CSA alone, may experience different symptoms and outcomes associated with their disease processes. Patients who have been diagnosed with CSA alone present with excessive sleepiness, poor sleep quality, insomnia, poor concentration, and inattention.<sup>121</sup> Conversely, patients who have been diagnosed with the comorbid conditions of CSA as a result of heart failure experience significant cardiovascular insults resulting from sympathetic nervous system activation, pulmonary hypertension, and arrhythmias, which ultimately contribute to the downward cycle of heart failure.<sup>122</sup>

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<sup>121</sup> Badr, M. S., 2017, Dec 11, "Central sleep apnea: Risk factors, clinical presentation, and diagnosis," Available at: <https://www.uptodate.com/contents/central-sleep-apnea-risk-factors-clinical-presentation-and-diagnosis?csi=d3a535e6-1cca-4cd5-ab5e-50e9847bda6c&source=contentShare>.

<sup>122</sup> Abraham, W., Jagielski, D., Oldenburg, O., Augostini, R., Kreuger, S., Kolodziej, A., Ponikowski, P., "Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnea," *JACC: Heart Failure*, 2015, vol. 3(5), pp. 360-369.

We also noted that the clinical study had a small patient population (n=151), with follow-up for 6 months. We stated that we were interested in longer follow-up data that would further validate the points made by the applicant regarding the beneficial outcomes seen in patients who have been diagnosed with CSA who have been treated using the remedē<sup>®</sup> System. We also expressed interest in additional information regarding the possibility of electrical stimulation of unintended targets and devices combined with the possibility of interference from outside devices. Furthermore, we stated that we were unsure with regard to the longevity of the implanted device, batteries, and leads because it appears that the technology is meant to remain in use for the remainder of a patient's life. We invited public comments on whether the remedē<sup>®</sup> System represents a substantial clinical improvement over existing technologies.

Comment: The applicant provided responses to CMS' substantial clinical improvement concerns presented in the FY 2019 IPPS/LTCH PPS proposed rule regarding the use of the remedē<sup>®</sup> System. With regard to CMS' concern that the clinical studies of the remedē<sup>®</sup> System did not include comparisons to PAP treatments, which are available treatment options for non-heart failure patients who have been diagnosed with CSA, the applicant stated that the following are several reasons for not using PAP treatments as comparators in their clinical trials:

- Other clinical trials, such as the CANPAP and SERVE-HF, which used PAP treatments in the course of treating patients who had been diagnosed with CSA were halted early due to the possibility of increased mortality;

- There exists little evidence showing that PAP treatments are effective for treatment of non-heart failure patients who have been diagnosed with CSA, according to the AASM; and

- Prior to the development of the remedē<sup>®</sup> System's pivotal trial, there was a lack of prospective, randomized data showing a relationship between PAP treatments and morbidity outcomes.

The applicant also believed that positive airway pressure devices were more likely to be considered for use in the treatment of patients who have been diagnosed with CSA, but without a diagnosis of heart failure. Another commenter stated that it agreed with the applicant's reasons and supported the rationale for not using PAP treatments as comparators in its clinical trials.

With regard to CMS' concern that claims related to mortality following treatment with the remedē<sup>®</sup> System are limited, the applicant agreed with CMS' assessment and stated that limited research on the system's impact on mortality for patients who have been diagnosed with CSA has been completed. The applicant further noted that mortality information was collected primarily for safety purposes during the pivotal trial. Another commenter also agreed with CMS' and the applicant's assessment and reiterated the applicant's statements.

The applicant addressed CMS' concern that the FDA-approved indication for the remedē<sup>®</sup> System is for all patients diagnosed with moderate to severe CSA and not specifically those diagnosed with a heart failure comorbidity. The applicant stated that the data from the pivotal trial provided evidence that the use of the remedē<sup>®</sup> System as a

treatment option is safe and effective for patients who have been diagnosed with CSA, regardless of a heart failure comorbidity. Another commenter agreed with the applicant and stated that the data from the pivotal trial supported the applicant's response regarding the concern of the FDA-approved indication.

Regarding the concern that baseline statistical comparisons between treatment groups were not provided controlling for heart failure status, the applicant stated that there were no significant differences in baseline CSA disease burden between the treatment and control groups. The applicant further stated that, as expected, the heart failure and non-heart failure groups differed slightly by age and cardiac (for example, atrial fibrillation and hypertension) and other comorbidities (for example, hospitalizations within the last 12 months, diabetes, renal disease, depression).

In regard to the results at 6 and 12 months, the applicant stated that in all categories, except for quality of life, both the heart failure and non-heart failure groups showed statistically significant improvements from the baseline. The applicant asserted that for quality of life, which did not have a baseline, both groups had greater than 50 percent of respondents, which demonstrates marked or moderate improvement to their quality of life with a higher proportion in the non-heart failure group as compared to the heart failure group. Another commenter added that given the overall consistent balance achieved between the treatment and control groups across the many baseline variables examined, there is no evidence suggesting noteworthy imbalances to be expected in these subgroups.

The applicant addressed CMS' concerns related to the differences between heart failure and non-heart failure patients who received treatment with the remedē<sup>®</sup> System. The applicant asserted that it is well established that a significant proportion of patients who have been diagnosed with CSA have a heart failure comorbidity; 64 percent of patients enrolled in the pivotal trial had a diagnosis of heart failure. The applicant stated that it expected a higher proportion of heart failure patients enrolled in the study of CSA due to the correlated incidence of these diseases and the pivotal trial inclusion criteria being based on conventional sleep apnea metrics and not comorbidities. The applicant further stated that, regardless of the patients' comorbidity status, patients experienced consistent and durable improvements with the use of the remedē<sup>®</sup> System as a treatment option.

The applicant responded to CMS' concern regarding the small sample size used for the pivotal trial. The applicant stated that the sample size was chosen with an alpha error of 0.025, a power of 80 percent, an expected 50 percent response rate in the treatment group, and a 25 percent response rate in the control group. The applicant further stated that the study accounted for a 15 percent implantation failure and a 10 percent drop-out rate. The applicant indicated that, ultimately, the trial randomized 151 patients, with 147 successful implantations. Another commenter stated that the results showing highly statistical significance were derived from a sample size of patients across 31 different places around the world and, therefore, are generalizable.

The applicant responded to CMS' interest in longer term follow-up data. The applicant stated that 12-month follow-up data was recently published providing 12

months of treatment data for patients enrolled in the treated group and 6 months of treatment data for patients enrolled in the control group. Other commenters stated that 12-month follow-up data results are available and show continued durability of 6-month results.

The applicant addressed CMS' concern about the potential for electrical stimulation of unintended targets and interference from outside devices. The applicant stated that 42 percent of the patients involved in the pivotal trial had a concomitant cardiac device. The applicant stated that interactions between devices are not unique to the remedē<sup>®</sup> System and that only three serious device interactions were reported, all of which were resolved with reprogramming. The applicant further indicated that, all except 1 of the 21 extra-respiratory stimulation cases that occurred were resolved with routine reprogramming of the remedē<sup>®</sup> System, the other required repositioning of the lead. Ultimately, 96 percent of the patients enrolled in the pivotal trial would elect to have the medical procedure again.

Lastly, the applicant addressed CMS' concern about longevity of the implanted device, batteries, and leads. The applicant stated that the expected typical battery life is 41 months, which is consistent with other implanted neurostimulation devices. The applicant further stated that the leads were FDA pre-market approved and designed based on predicate, permanent cardiac pacing leads for which the standards are more rigorous than those for neurostimulation. The applicant indicated that, the leads, therefore, compare favorably to leads used for neurostimulation in categories such as lead breakage, connector failure, lead dislodgement, and infection.

Another commenter responded to CMS' concern about the possible failure in randomization when controlling for heart failure status. The commenter stated that it does not consider the reported baseline difference as a failure of randomization. The commenter further noted that, of the approximately 50 baseline factors examined and reported in the clinical study report from the pivotal trial, only MAI had a p-value equal to less than 0.05 associated with a study group difference.

Many commenters stated that the remedē<sup>®</sup> System represented a substantial clinical improvement and referenced clinical data, in general, and others specifically mentioned the pivotal trial results as demonstration of the improved benefit over existing treatment options. These commenters also noted that the use of the remedē<sup>®</sup> System and the mechanism of action of phrenic nerve stimulation showed sustained benefits for patients who have been diagnosed with CSA and received treatment using the system.

Response: We appreciate the thoroughness of the additional information and analyses provided by the applicant and commenters in response to our concerns regarding whether the technology meets the substantial clinical improvement criterion. We agree with the applicant and commenters that the use of the remedē<sup>®</sup> System represents a substantial clinical improvement over existing technologies because, based on the information provided by the applicant, it substantially improves relevant metrics related to the CSA condition, regardless of whether there is the presence of heart failure comorbidities. Specifically, the applicant provided data which demonstrated the effectiveness of the remedē<sup>®</sup> System for the treatment of moderate and severe CSA in all treated patients, regardless of a heart failure comorbidity. Patients without a diagnosis of

heart failure benefited from treatment involving the remedē<sup>®</sup> System, as well as those with a diagnosis of heart failure. Furthermore, the applicant and commenters provided evidence to allay our concerns as they related to a lack of use of CPAP as a comparator for the remedē<sup>®</sup> System in clinical trials, baseline data regarding differences between heart failure and non-heart failure groups, a small sample size in the pivotal trial, longer term follow-up data, the potential for interplay between concomitant devices, and the longevity of the device, batteries, and leads.

After consideration of the public comments we received, we have determined that the remedē<sup>®</sup> System meets all of the criteria for approval for new technology add-on payments. Therefore, we are approving new technology add-on payments for the remedē<sup>®</sup> System for FY 2019. Cases involving the use of the remedē<sup>®</sup> System that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure codes 0JH60DZ and 05H33MZ in combination with procedure code 05H03MZ (Insertion of neurostimulator lead into right innominate vein, percutaneous approach) or 05H043MZ (Insertion of neurostimulator lead into left innominate vein, percutaneous approach).

In its application, the applicant estimated that the average Medicare beneficiary would require the surgical implantation of one remedē<sup>®</sup> System per patient. According to the application, the cost of the remedē<sup>®</sup> System is \$34,500 per patient. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a

case involving the use of the remedē<sup>®</sup> System is \$17,250 for FY 2019. In accordance with the current indication for the use of the remedē<sup>®</sup> System, CMS expects that the remedē<sup>®</sup> System will be used for the treatment of adult patients who have been diagnosed with moderate to severe CSA.

e. Titan Spine nanoLOCK<sup>®</sup> (Titan Spine nanoLOCK<sup>®</sup> Interbody Device)

Titan Spine submitted an application for new technology add-on payments for the Titan Spine nanoLOCK<sup>®</sup> Interbody Device (the Titan Spine nanoLOCK<sup>®</sup>) for FY 2019. (We note that the applicant previously submitted an application for new technology add-on payments for this device for FY 2017.) The Titan Spine nanoLOCK<sup>®</sup> is a nanotechnology-based interbody medical device with a dual acid-etched titanium interbody system used to treat patients diagnosed with degenerative disc disease (DDD). One of the key distinguishing features of the device is the surface manufacturing technique and materials, which produce macro, micro, and nano-surface textures. According to the applicant, the combination of surface topographies enables initial implant fixation, mimics an osteoclastic pit for bone growth, and produces the nano-scale features that interface with the integrins on the outside of the cellular membrane. Further, the applicant noted that these features generate better osteogenic and angiogenic responses that enhance bone growth, fusion, and stability. The applicant asserted that the Titan Spine nanoLOCK<sup>®</sup>'s clinical features also reduce pain, improve recovery time, and produce lower rates of device complications such as debris and inflammation.

On October 27, 2014, the Titan Spine nanoLOCK<sup>®</sup> received FDA clearance for the use of five lumbar interbody devices and one cervical interbody device: the

nanoLOCK<sup>®</sup> TA -- Sterile Packaged Lumbar ALIF Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy; the nanoLOCK<sup>®</sup> TAS -- Sterile Packaged Lumbar ALIF Stand Alone Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy; the nanoLOCK<sup>®</sup> TL -- Sterile Packaged Lumbar Lateral Approach Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy; the nanoLOCK<sup>®</sup> TO -- Sterile Packaged Lumbar Oblique/PLIF Approach Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy; the nanoLOCK<sup>®</sup> TT -- Sterile Packaged Lumbar TLIF Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy; and the nanoLOCK<sup>®</sup> TC -- Sterile Packaged Cervical Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy.

The applicant received FDA clearance on December 14, 2015, for the nanoLOCK<sup>®</sup> TCS -- Sterile Package Cervical Stand Alone Interbody Fusion Device with nanoLOCK<sup>®</sup> surface, available in multiple sizes to accommodate anatomy. According to the applicant, July 8, 2016, was the first date that the nanotechnology production facility completed validations and clearances needed to manufacture the nanoLOCK<sup>®</sup> interbody fusion devices. Once validations and clearances were completed, the technology was available on the U.S. market on October 1, 2016. Therefore, the applicant believes that the newness period for nanoLOCK<sup>®</sup> would begin on October 1, 2016. Procedures involving the Titan Spine nanoLOCK<sup>®</sup> technology can be identified by the following ICD-10-PCS Section "X" New Technology codes:

- XRG0092 (Fusion of occipital-cervical joint using nanotextured surface interbody fusion device, open approach);
- XRG1092 (Fusion of cervical vertebral joint using nanotextured surface interbody fusion device, open approach);
- XRG2092 (Fusion of 2 or more cervical vertebral joints using nanotextured surface interbody fusion device, open approach);
- XRG4092 (Fusion of cervicothoracic vertebral joint using nanotextured surface interbody fusion device, open approach);
- XRG6092 (Fusion of thoracic vertebral joint using nanotextured surface interbody fusion device, open approach);
- XRG7092 (Fusion of 2 to 7 thoracic vertebral joints using nanotextured surface interbody fusion device, open approach);
- XRG8092 (Fusion of 8 or more thoracic vertebral joints using nanotextured surface interbody fusion device, open approach);
- XRG A092 (Fusion of thoracolumbar vertebral joint using nanotextured surface interbody fusion device, open approach);
- XRGB092 (Fusion of lumbar vertebral joint using nanotextured surface interbody fusion device, open approach);
- XRG C092 (Fusion of 2 or more lumbar vertebral joints using nanotextured surface interbody fusion device, open approach); and
- XRG D092 (Fusion of lumbosacral joint using nanotextured surface interbody fusion device, open approach).

We note that the applicant expressed concern that interbody fusion devices that have failed to gain or apply for FDA clearance with nanoscale features could confuse health care providers with marketing and advertising using terms related to nanotechnology and ultimately adversely affect patient outcomes.

As discussed previously, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for the purposes of new technology add-on payments. In the proposed rule we noted that the substantial similarity discussion is applicable to both the lumbar and the cervical interbody devices because all of the devices use the Titan Spine nanoLOCK<sup>®</sup> technology.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant stated that, for both interbody devices (the lumbar and the cervical interbody device), the Titan Spine nanoLOCK<sup>®</sup>'s surface stimulates osteogenic cellular response to assist in bone formation during fusion. According to the applicant, the mechanism of action exhibited by the Titan Spine's nanoLOCK<sup>®</sup> surface technology involves the ability to create surface features that are meaningful to cellular regeneration at the nano-scale level. During the manufacturing process, the surface produces macro, micro, and nano-surface textures. The applicant believed that this unique combination and use of these surface topographies represents a new approach to stimulating osteogenic cellular response. The applicant further asserted that the macro-scale textured features are important for initial implant fixation; the micro-scale textured features mimic an osteoclastic pit for supporting bone

growth; and the nano-scale textured features interface with the integrins on the outside of the cellular membrane, which generates the osteogenic and angiogenic (mRNA) responses necessary to promote healthy bone growth and fusion. The applicant stated that when correctly manufactured, an interbody fusion device includes a hierarchy of complex surface features, visible at different levels of magnification, that work collectively to impact cellular response through mechanical, cellular, and biochemical properties. The applicant stated that Titan Spine's proprietary and unique surface technology, the Titan Spine nanoLOCK<sup>®</sup> interbody devices, contain optimized nano surface characteristics, which generate the distinct cellular responses necessary for improved bone growth, fusion, and stability. The applicant further stated that the Titan Spine nanoLOCK<sup>®</sup>'s surface engages with the strongest portion of the vertebral endplate, which enables better resistance to subsidence because a unique dual acid-etched titanium surface promotes earlier bone in-growth. According to the applicant, the Titan Spine nanoLOCK<sup>®</sup>'s surface is created by using a reductive process of the titanium itself. The applicant asserted that use of the Titan Spine nanoLOCK<sup>®</sup> significantly reduces the potential for debris generated during impaction when compared to treatments using Polyetheretherketone (PEEK)-based implants coated with titanium. According to the results of an in vitro study (provided by the applicant), which examined factors produced by human mesenchymal stem cells on spine implant materials that compared angiogenic factor production using PEEK-based versus titanium alloy surfaces, osteogenic production levels were greater with the use of rough titanium alloy surfaces than the levels produced using smooth titanium alloy surfaces. Human mesenchymal stem cells

were cultured on tissue culture polystyrene, PEEK, smooth TiAlV, or macro-/micro-/nanotextured rough TiAlV (mmnTiAlV) disks. Osteoblastic differentiation and secreted inflammatory interleukins were assessed after 7 days. The results of an additional study provided by the applicant examined whether inflammatory microenvironment generated by cells as a result of use of titanium aluminum-vanadium (Ti-alloy, TiAlV) surfaces is effected by surface micro texture, and whether it differs from the effects generated by PEEK-based substrates. This in vitro study compared angiogenic factor production and integrin gene expression of human osteoblast-like MG63 cells cultured on PEEK or titanium-aluminum vanadium (titanium alloy). Based on these study results, the applicant asserted that the use of micro textured surfaces has demonstrated greater promotion of osteoblast differentiation when compared to use of PEEK-based surfaces.

The applicant maintains that the nanoLOCK<sup>®</sup> was the first, and remains the only, device in spinal fusion, to apply for and successfully obtain a clearance for nanotechnology from the FDA. According to the applicant, in order for a medical device to receive a nanotechnology FDA clearance, the burden of proof includes each of the following to be present on the medical device in question: (1) proof of specific nano scale features, (2) proof of capability to manufacture nano-scale features with repeatability and documented frequency across an entire device, and (3) proof that those nano-scale features provide a scientific benefit, not found on devices where the surface features are not present. The applicant further stated that many of the commercially available interbody fusion devices are created using additive manufacturing processes to mold or build surface from the ground up. Conversely, Titan Spine applied a subtractive

surface manufacturing to remove pieces of a surface. The surface features that remain after this subtractive process generate features visible at magnifications that additive manufacturing has not been able to produce. According to the applicant, this subtractive process has been validated by the White House Office of Science and Technology, the National Nanotechnology Initiative, and the FDA that provide clearances to products that exhibit unique and repeatable features at predictive frequency due to a manufacturing technique.

With regard to the second criterion, whether a product is assigned to the same or a different MS-DRG, cases representing patients that may be eligible for treatment involving the Titan Spine nanoLOCK<sup>®</sup> technology would map to the same MS-DRGs as other (lumbar and cervical) interbody devices currently available to Medicare beneficiaries and also are used for the treatment of patients who have been diagnosed with DDD (lumbar or cervical).

With regard to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant stated that the Titan Spine nanoLOCK<sup>®</sup> can be used in the treatment of patients who have been diagnosed with similar types of diseases, such as DDD, and for a similar patient population receiving treatment involving both lumbar and cervical interbody devices.

In summary, the applicant maintained that the Titan Spine nanoLOCK<sup>®</sup> technology has a different mechanism of action when compared to other spinal fusion

devices. Therefore, the applicant did not believe that the Titan Spine nanoLOCK<sup>®</sup> technology is substantially similar to existing technologies.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20316), we stated we were concerned that the Titan Spine nanoLOCK<sup>®</sup> interbody devices may be substantially similar to currently available titanium interbody devices because other roughened surface interbody devices also stimulate bone growth. While there is a uniqueness to the nanotechnology used by the applicant, other devices also stimulate bone growth such as PEEK-based surfaces and, therefore, we were concerned that the Titan Spine nanoLOCK<sup>®</sup> interbody devices use the same or similar mechanism of action as other devices.

We invited public comments on whether the Titan Spine nanoLOCK<sup>®</sup> interbody devices are substantially similar to existing technologies and whether these devices meet the newness criterion.

Comment: One commenter stated that similar products to the nanoLOCK<sup>®</sup> interbody devices exist, and there is no unbiased research to support the applicant's claims of the technology's results. Several commenters referenced studies that show that nano-scale enhanced Ti6Al4V interbody fusion device surfaces promote a cellular response to bone growth. The commenters stated that these studies show that cells in the osteoblast lineage (MSCs, osteoprogenitor cells, and osteoblasts) exhibited a more mature osteoblast phenotype when grown on microtextured Ti and Ti6Al4V surfaces than on tissue culture polystyrene (TCPS) or on other polymers like PEEK. The commenters further stated that, moreover, cells on the Ti6Al4V surfaces produced less inflammatory

mediators, less apoptotic factors and less necrosis factors than cells on PEEK surfaces (rough < smooth Ti6Al4V <<< smooth PEEK) and that PEEK surfaces have long been associated with increased fibrous encapsulation *in vivo*, which was recently identified to be due to a direct upregulation of inflammatory factors from mesenchymal stem cells growing on PEEK.

Response: We agree with the commenter that similar products to the nanoLOCK<sup>®</sup> interbody devices exist. We also believe that the current research supports the applicant's assertion that the technology's nanoscale features, which exhibit a biological effect (osteoblastic activity), have not been seen in other interbody fusion devices. After consideration of the public comments we received, we believe that the Titan Spine nanoLock<sup>®</sup> uses a unique mechanism of action, a nano-scale level surface technology, to enhance bone growth. Therefore, we believe the Titan Spine nanoLock<sup>®</sup> is not substantially similar to other existing technologies and meets the newness criterion.

The applicant provided three analyses of claims data from the FY 2016 MedPAR file to demonstrate that the Titan Spine nanoLOCK<sup>®</sup> interbody devices meet the cost criterion. In the proposed rule, we noted that cases reporting procedures involving lumbar and cervical interbody devices would map to different MS-DRGs. As discussed in the Inpatient New Technology Add On Payment Final Rule (66 FR 46915), two separate reviews and evaluations of the technologies are necessary in this instance because cases representing patients receiving treatment for diagnoses associated with lumbar procedures that may be eligible for use of the technology under the first indication would not be expected to be assigned to the same MS DRGs as cases representing

patients receiving treatment for diagnoses associated with cervical procedures that may be eligible for use of the technology under the second indication. Specifically, cases representing patients who have been diagnosed with lumbar DDD and who have received treatment that involved implanting a lumbar interbody device would map to MS DRG 028 (Spinal Procedures with MCC), MS-DRG 029 (Spinal Procedures with CC or Spinal Neurostimulators), MS DRG 030 (Spinal Procedures without CC/MCC), MS-DRG 453 (Combined Anterior/Posterior Spinal Fusion with MCC), MS-DRG 454 (Combined Anterior/Posterior Spinal Fusion with CC), MS-DRG 455 (Combined Anterior/Posterior Spinal Fusion without CC/MCC), MS-DRG 456 (Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions with MCC), MS DRG 457 (Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusion without MCC), MS-DRG 458 (Spinal Fusion Except Cervical with Spinal Curvature or Malignancy or Infection or Extensive Fusions without CC/MCC), MS-DRG 459 (Spinal Fusion Except Cervical with MCC), and MS-DRG 460 (Spinal Fusion Except Cervical without MCC). Cases representing patients who have been diagnosed with cervical DDD and who have received treatment that involved implanting a cervical interbody device would map to MS DRG 471 (Cervical Spinal Fusion with MCC), MS-DRG 472 (Cervical Spinal Fusion with CC), and MS-DRG 473 (Cervical Spinal Fusion without CC/MCC). Procedures involving the implantation of lumbar and cervical interbody devices are assigned to separate MS DRGs. Therefore, the devices categorized as lumbar interbody devices and the devices categorized as cervical interbody devices must distinctively (each category) meet the cost criterion and the substantial

clinical improvement criterion in order to be eligible for new technology add on payments beginning in FY 2019.

The first analysis searched for any of the ICD-10-PCS procedure codes within the code series Lumbar – 0SG [body parts 0 1 3] [open approach only 0] [device A only] [anterior column only 0, J], which typically are assigned to MS DRGs 028, 029, 030, and 453 through 460. The average case-weighted unstandardized charge per case was \$153,005. The applicant then removed charges related to the predicate technology and then standardized the charges. The applicant then applied an inflation factor of 1.09357, the value used in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527) to update the charges from FY 2016 to FY 2018. The applicant added charges related to the Titan Spine nanoLOCK<sup>®</sup> lumbar interbody devices. This resulted in a final inflated average case-weighted standardized charge per case of \$174,688, which exceeded the average case-weighted Table 10 MS-DRG threshold amount of \$83,543.

The second analysis searched for any of the ICD-10-PCS procedure codes within the code series Cervical – 0RG [body parts 0 – A] [open approach only 0] [device A only] [anterior column only 0, J], which typically are assigned to MS-DRGs 028, 029, 030, 453 through 455, and 471 through 473. The average case-weighted unstandardized charge per case was \$88,034. The methodology used in the first analysis was used for the second analysis, which resulted in a final inflated average case-weighted standardized charge per case of \$101,953, which exceeded the average case-weighted Table 10 MS-DRG threshold amount of \$83,543.

The third analysis was a combination of the first and second analyses described earlier that searched for any of the ICD-10-PCS procedure codes within the Lumbar and Cervical code series listed above that are assigned to the MS-DRGs in the analyses above. The average case-weighted unstandardized charge per case was \$127,736. The methodology used for the first and second analysis was used for the third analysis, which resulted in a final inflated average case-weighted standardized charge per case of \$149,915, which exceeded the average case-weighted Table 10 MS-DRG threshold amount of \$104,094.

Because the final inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount in all of the applicant's analyses, the applicant maintained that the technology met the cost criterion.

We invited public comments on whether the Titan Spine nanoLOCK<sup>®</sup> meets the cost criterion.

We did not receive any public comments concerning whether the Titan Spine nanoLOCK<sup>®</sup> meets the cost criterion or the cost analysis presented in the proposed rule. We believe that the Titan Spine nanoLOCK<sup>®</sup> meets the cost criterion.

With regard to the substantial clinical improvement criterion for the Titan Spine nanoLOCK<sup>®</sup> Interbody Lumbar and Cervical Devices, the applicant submitted the results of two clinical evaluations. The first clinical evaluation was a case series and the second was a case control study. Regarding the case series, 4 physicians submitted clinical information on 146 patients. The 146 patients resulted from 2 surgery groups: a cervical group of 73 patients and a lumbar group of 73 patients. The division into cervical and

lumbar groups was due to differences in surgical procedure and expected recovery time. Subsequently, the collection and analyses of data were presented for lumbar and cervical nanoLOCK<sup>®</sup> device implants. Data was collected using medical record review. Patient baseline characteristics, the reason for cervical and lumbar surgical intervention, inclusion and exclusion criteria, details on the types of pain medications and the pattern of usage preoperatively and postoperatively were not provided. In the proposed rule, we noted that the applicant did not provide an explanation of why the outcomes studied in the case series were chosen for review. However, the applicant noted that the case series data were restricted to patients treated with the Titan Spine nanoLOCK<sup>®</sup> device, with both retrospective and prospective data collection. These data appeared to be clinically related and included: (1) pain medication usage; (2) extremity and back pain (assessed using the Numeric Pain Rating Scale (NPRS)); and (3) function (assessed using the Oswestry Disability Index (ODI)). Clinical data collection began with time points defined as “Baseline (pre-operation), Month 1 (0 - 4 weeks), Month 2 (5 - 8 weeks), Month 3 (9 - 12 weeks), Month 4 (13 - 16 weeks), Month 5 (17 - 20 weeks) and Month 6+ (>20 weeks)”. The n, mean, and standard deviation were presented for continuous variables (NPRS extremity pain, back pain, and ODI scores), and the n and percentage were presented for categorical variables (subjects taking pain medications). All analyses compared the time point (for example, Month 1) to the baseline.

Pain scores for extremities (leg and arm) were assessed using the NPRS, an 11 category ordinal scale where 0 is the lowest value and 10 is the highest value and, therefore, higher scores indicate more severe pain. Of the 73 patients in the lumbar

group, the applicant presented data on 18 cases for leg or arm pain at baseline that had a mean score of 6.4, standard deviation (SD) 2.3. Between Month 1 and Month 6+ the number of lumbar patients for which data was submitted for leg or arm pain ranged from 3 patients (Month 5, mean score 3.7, SD 3.5) to 15 patients (Month 6+, mean score 2.5, SD 2.4), with varying numbers of patients for each of the other defined time points of Month 1 through Month 4. None of the defined time points of Month 1 through Month 4 had more than 14 patients or less than 3 patients that were assessed.

Of the 73 patients in the cervical group, 7 were assessed for leg or arm pain at baseline and had a mean score of 5.1, SD 3.5. Between Month 1 and Month 6+ the number of cervical patients assessed for leg or arm pain ranged from 0 patients (Month 5, no scores) to 5 patients (Month 1, mean score 4.2, SD 2.6), with varying numbers of patients for each of the other defined time points of Month 1 through Month 4. None of the defined time points of Month 1 through Month 4 had more than 5 patients or less than 2 patients that were assessed.

Back pain scores were also assessed using the NPRS, where 0 is the lowest value and 10 is the highest value and, therefore, higher scores indicate more severe pain. Of the 73 patients in the lumbar group, 66 were assessed for back pain at baseline and had a mean score of 7.9, SD 1.8. Between Month 1 and Month 6+ the number of lumbar patients assessed for back pain ranged from 4 patients (Month 5, mean score 4.0, SD 2.7) to 43 patients (Month 1, mean score 4.5, SD 2.7), with varying numbers of patients for each defined time point.

Of the 73 patients in the cervical group, 71 were assessed for back pain at baseline and had a mean score of 7.5, SD 2.3. Between Month 1 and Month 6+ the number of cervical patients assessed for back pain ranged from 2 patients (Month 5, mean score 7.0, SD 2.8) to 47 patients (Month 1, mean score 4.4, SD 2.9), with varying numbers of patients for each defined time point.

Function was assessed using the ODI, which ranges from 0 to 100, with higher scores indicating increased disability/impairment. Of the 73 patients in the lumbar group, 59 were assessed for ODI scores at baseline and had a mean score of 52.5, SD 18.7. Between Month 1 and Month 6+ the number of lumbar patients assessed for ODI scores ranged from 3 patients (Month 5, mean score 33.3, SD 19.8) to 38 patients (Month 1, mean score 48.1, SD 19.7), with varying numbers of patients for each defined time point. Of the 73 patients in the cervical group, 56 were assessed for ODI scores at baseline and had a mean score of 53.6, SD 18.2. Between Month 1 and Month 6+ the number of cervical patients assessed for ODI score ranged from 1 patient (Month 5, mean score 80, no SD noted) to 41 patients (Month 1, mean score 48.6, SD 20.5), with varying numbers of patients for each defined time point.

The percentages of patients not taking pain medicines per day for the lumbar and cervical groups over time were assessed. Of the 73 patients in the lumbar group, 69 were assessed at baseline and 27.5 percent of the 69 patients were not taking pain medication. Between Month 1 and Month 6+ the number of lumbar patients assessed for not taking pain medicines ranged from 5 patients (Month 5, 80 percent were not taking pain medicines) to 46 patients (Month 1, 54.3 percent were not taking pain medicines), with

varying numbers of patients for each defined time point. Of the 73 patients in the cervical group, 72 were assessed and 22.2 percent of the 72 patients were not taking pain medicines at baseline. Between Month 1 and Month 6+ the number of cervical patients assessed for not taking pain medicines ranged from 2 patients (Month 5, 100 percent were not taking pain medicines) to 50 patients (Month 1, 70 percent were not taking pain medicines), with varying numbers of patients for each defined time point.

According to the applicant, both the lumbar and cervical groups showed a trend of improvement in all four clinical outcomes over time for which they collected data in their case series. However, the applicant also indicated that the trend was difficult to assess due to the relatively limited number of subjects with available assessments more than 4 months post-implant. The applicant shared that it had missing values for over 80 percent of the subjects in the study after the 4th post-operative month. According to the applicant and its results of the clinical evaluation, which was based on data from less than 20 percent of subjects, there was a statistically significant reduction in back pain for nanoLOCK® patients from “Baseline,” based on improvement at earlier than standard time points.

In the proposed rule, we stated we were concerned that the small sample size of patients assessed at each timed follow-up point for each of the clinical outcomes evaluated in the case series limited our ability to draw meaningful conclusions from these results. The applicant provided t-test results for the lumbar and cervical groups assessed for pain (back, leg, and arm). We indicated we were concerned that the t-test resulting

from small sample sizes (for example, 2 of 73 patients in Month 5, and 5 of 73 patients in Month 6+) does not indicate a statistically meaningful improvement in pain scores.

Based on the results of the case series provided by the applicant, we stated that we were unable to determine whether the findings regarding extremity and back pain, ODI scores, and percentage of subjects not taking pain medication for patients who received treatment involving the Titan Spine nanoLOCK<sup>®</sup> devices represent a substantial clinical improvement due to the inconsistent sample size over time across both treatment arms in all evaluated outcome measures. The quantity of missing data in this case series, along with the lack of explanation for the missing data, raised concerns for the interpretation of these results. We also stated that we were unable to determine based on this case series whether there were improvements in extremity pain and back pain, ODI scores, and percentage of subjects not taking pain medicines for patients who received treatment involving the Titan Spine nanoLOCK<sup>®</sup> devices versus conventional and other intervertebral body fusion devices, as there were no comparisons to current therapies. As noted in the proposed rule and above, the applicant did not provide an explanation of why the outcomes studied in the case series were chosen for review. Therefore, we believed that we may have had insufficient information to determine if the outcomes studied in the case series are validated proxies for evidence that the nanoLOCK<sup>®</sup>'s surface promotes greater osteoblast differentiation when compared to use of PEEK-based surfaces. We invited public comments regarding our concerns, including with respect to why the outcomes studied in the case series were chosen for review.

We note that, we did not receive any public comments with respect to why the outcomes in the case series were selected for review.

The applicant's second clinical evaluation was a case-control study with a 1:5 case to control ratio. The applicant used deterministically linked, de-identified, individual level health care claims, electronic medical records (EMR), and other data sources to identify 70 cases and 350 controls for a total sample size of 420 patients. The applicant also identified OM1™ data source and noted that the OM1™ data source reflects data from all U.S. States and territories and is representative of the U.S. national population. The applicant used OM1™ data between January 2016 and June 2017, and specifically indicated that these data contain medical and pharmacy claims information, laboratory data, vital signs, problem lists, and other clinical details. The applicant indicated that cases were selected using the ICD-10-PCS Section "X" New Technology codes listed above and controls were chosen from fusion spine procedures (Fusion Spine Anterior Cervical, Fusion Spine Anterior Cervical and Discectomy, Fusion Spine Anterior Posterior Cervical, Fusion Spine Transforaminal Interbody Lumbar, Fusion Spine Cervical Thoracic, Fusion Spine Transforaminal Interbody Lumbar with Navigation, and Fusion Spine Transforaminal Interbody Lumbar Robot-Assisted). Further, the applicant stated that cases and controls were matched by age (within 5 years), year of surgery, Charlson Comorbidity Index, and gender. According to the applicant, regarding clinical outcomes studied, unlike the case series, the case-control study captured Charlson Comorbidity Index, the average length of stay (ALOS), and 30-day

unplanned readmissions; like the case series, this case-control study captured the use of pain medications by assessing the cumulative post-surgical opioid use.

The mean age for all patients in the study was 55 years old, and 47 percent were male. For the clinical length of stay outcome, the applicant noted that the mean length of stay was slightly longer among control patients, 3.9 days (SD = 5.4) versus 3.2 days (SD = 2.9) for cases, and a larger proportion of patients in the control group had lengths of stay equal to or longer than 5 days (21 percent versus 17 percent). Three control patients (0.8 percent) were readmitted within 30 days compared to zero readmissions among case patients. A slightly lower proportion of case patients were on opioids 3 months post-surgery compared to control patients (15 percent versus 16 percent).

In the proposed rule (83 FR 20318), we stated we were concerned that there may be significant outliers not identified in the case and control arms because for the mean length of stay outcome, the standard deviation for control patients (5.4 days) is larger than the point estimate (3.9 days). Based on the results of this clinical evaluation provided by the applicant, we stated that we were unable to determine whether the findings regarding lengths of stay and cumulative post-surgical opioid use for patients who received treatment involving the nanoLOCK<sup>®</sup> devices versus conventional intervertebral body fusion devices represent a substantial clinical improvement. We stated that without further information on selection of controls and whether there were adjustments in the statistical analyses controlling for confounding factors (for example, cause of back pain, level of experience of the surgeon, BMI and length of pain), we were concerned that the interpretation of the results may be limited. Finally, we stated we

were concerned that the current data does not adequately support a strong association between the outcome measures of length of stay, readmission rates, and use of opioids and the use of nano-surface textures in the manufacturing of the Titan Spine nanoLOCK<sup>®</sup> device. For these reasons, we stated that we were concerned that the current data do not support a substantial clinical improvement over the currently available devices used for lumbar and cervical DDD treatment.

In the proposed rule, we noted that the applicant indicated its intent to submit the results of additional ongoing studies to support the evidence of substantial clinical improvement over existing technologies for patients who received treatment involving the nanoLOCK<sup>®</sup> devices versus patients receiving treatment involving other interbody fusion devices. We invited public comments on whether the Titan Spine nanoLOCK<sup>®</sup> meets the substantial clinical improvement criterion.

Comment: The applicant submitted a Milligram Morphine Equivalent (MME) analysis. According to the applicant, the purpose of the analysis is to demonstrate support for the “substantial clinical value” in the reduction of MME with the implant of a Titan Spine nanoLOCK<sup>®</sup> device. The applicant indicated that the MME analysis was conducted to assess the impact of nanoLOCK<sup>®</sup> versus control devices on total MME and narcotic usage. The applicant submitted the results of the MME analysis as additional demonstration to support the representation of a substantial clinical improvement over existing technologies as stated in their application, and indicated that the data will be published soon as a peer-reviewed journal article. The applicant explained that control devices represented a mix of interbody fusion devices, including PEEK and alternative

roughened titanium devices without nano-surface technology. The applicant stated that all nanoLOCK<sup>®</sup> patients were classified as having an interbody fusion device with a nano technology coated surface. The applicant further indicated that all patients received either an allograft or autograft biologic in addition to the implant device. The applicant stated that follow-up time was recorded at 3 points: Follow-up #1 -- 28.71 days (S.D. 20.64); Follow-up #2 -- 65.07 days (S.D. 33.91); and Follow-up #3 - 104.21 days (S.D. 40.91). According to the applicant, a patient's baseline MME was also a significant predictor of MME at first follow-up when adjusted for all other variables in the model. The applicant stated that, at Follow-up #1, there was a total of 926 patients with data regarding the days from surgery to the first follow-up. The applicant indicated that, according to the MME analysis, of the 926 patients at the time of Follow-up #1, 47 patients had missing data. The applicant further stated that results show there were 873 patients with data on narcotic usage at the time of the first follow-up, with 100 patients with missing data, and 391 patients with data on the total MME, with 582 missing data at the time of final analysis of follow-up #1. The applicant stated that the results from the remaining 391 patients represent only 42 percent of the original study participants. The applicant explained that results indicated the mean total MME of patients was 21.83 units (SD: 42.63). The applicant further stated that there were 349 patients who were using narcotics for pain at the time of their first follow-up. The applicant explained that all missing data was addressed through pairwise deletion. The applicant believed that this analysis further demonstrated that patients who received nanoLOCK<sup>®</sup> had a significantly lower total MME at first follow-up when compared to control devices patients when

adjusted for the following variables: age, male versus female, history of prior spine surgery, current smoker versus non-smoker, baseline MME, concomitant medical condition, cervical versus lumbar, nanoLOCK<sup>®</sup> versus control, single versus multi-level surgery, and intra-op complication. The applicant stated that, based on the results of the MME analysis, the use of nanoLOCK<sup>®</sup> reduced total MME by MME 24.47 units (95 percent CI: 14.42 to 34.52 units) more than patients who received treatment using a control device. The applicant explained that a patient's baseline MME was also a significant predictor of MME at first follow-up when adjusted for all other variables in the model. The applicant noted that the lack of standardized registries to collect spine data, combined with the inability to access CMS registry information in advance, means that the multiple examples provided by the applicant regarding the use of nanoLOCK<sup>®</sup> are the most robust information available and the consistency in outcomes with statistical significance means the product's attributes generate clinical value.

Response: We appreciate the additional data provided by the applicant.

However, we are unable to determine the substantial clinical value based on the analysis' data, due in part to the vast amount of missing data and inconsistencies in the data provided. For example, at each point of follow-up the number of patients in the analysis' cohort is reduced, and "missing" numbers of patients in the cohort are listed. Although the analysis attempts to account for the missing patients and patients' data by pairwise deletions, we are unable to determine a consistent cohort of patients for which a possible reduction in MME usage may have occurred. We attempted to assess for a pattern of consistency with the "missing" data and have been unable to determine any such pattern.

Additionally, while the applicant stated that it used a sample size of  $n = 926$  patients, throughout the analyses we noted varying numbers of patients for many of the variables included as covariates, making it difficult to arrive at a meaningful conclusion. We also note that the applicant did not provide further information on our concern for the selection of controls and whether there were adjustments in the statistical analyses controlling for confounding factors (for example, cause of back pain, level of experience of the surgeon, BMI and length of pain).

Comment: One commenter stated that the nanoLOCK<sup>®</sup> provides a substantial clinical benefit, which is evidenced by multiple third-party analytics evaluations that were performed outside of the manufacturer's control. The commenter stated that these analytic evaluations have found that the nanoLOCK<sup>®</sup> technology has led to reduced hospital inpatient mean length of stay, fewer total readmissions over 30 days post operation, and decreased use of prescription opioids for post-operative spinal surgery patients. However, the commenter did not provide the specific third-party analytic evaluations with its public comment submission. Several commenters believed that the nanoLOCK<sup>®</sup> technology represents a substantial clinical improvement over current devices based on personal experience. One commenter stated that within its specific patient population, patients are returning to work faster, participating in more physical therapy, and reducing their use of opiate pain medications. Another commenter with personal experience with the nanoLOCK<sup>®</sup> technology also stated that substantial improvement within the fusion patient population had been recognized because of the granted access to the nano-surface technology. The commenter noted that patients are

back to work earlier, starting physical therapy earlier, and require less narcotic medication after surgery compared to earlier patients who received treatment involving other fusion implants.

Response: We appreciate the input and additional information from the commenters in support for the Titan Spine nanoLOCK<sup>®</sup> based on personal surgical experience and third party analytics. However, we note that the comments based on personal surgical experience were of a qualitative nature and did not contain objective data to support whether the Titan Spine nanoLOCK<sup>®</sup> meets the substantial clinical improvement criterion. We believe that the Titan Spine nanoLock<sup>®</sup> may potentially be a viable alternative to existing technologies. However, the data provided did not show that use of nanoLock<sup>®</sup> interbody fusion devices provides a substantial clinical improvement over existing technologies.

After consideration of all the information from the applicant, as well as the public comments we received, we are unable to determine if the Titan Spine nanoLOCK<sup>®</sup> represents a substantial clinical improvement over the currently available devices used for lumbar and cervical DDD treatment due to a lack of significant and meaningful data. As stated above, we remain concerned that the current data does not adequately support a sufficient association between the outcome measures of length of stay, readmission rates, and use of opioids and the use of nano-surface textures in the manufacturing of the Titan Spine nanoLOCK<sup>®</sup> device to determine that the technology represents a substantial clinical improvement over existing available options. Therefore, after consideration of

all of the new technology add-on payment criteria we are not approving new technology add-on payments for the Titan Spine nanoLock<sup>®</sup> devices for FY 2019.

f. ZEMDRI<sup>™</sup> (Plazomicin)

Achaogen, Inc. submitted an application for new technology add-on payments for Plazomicin for FY 2019. We note that, since the publication of the proposed rule, the applicant has announced that the trade name for Plazomicin is ZEMDRI<sup>™</sup>. According to the applicant, ZEMDRI<sup>™</sup> (Plazomicin) is a next-generation aminoglycoside antibiotic, which has been found in vitro to have enhanced activity against many multi-drug resistant (MDR) gram-negative bacteria. We stated in the proposed rule that the proposed indication for the use of Plazomicin, which had not received FDA approval as of the time of the development of this proposed rule, was for the treatment of adult patients who have been diagnosed with the following infections caused by designated susceptible microorganisms: (1) complicated urinary tract infection (cUTI), including pyelonephritis; and (2) bloodstream infections (BSIs). We indicated that the applicant stated that it expected that Plazomicin would be reserved for use in the treatment of patients who have been diagnosed with these types of infections who have limited or no alternative treatment options, and would be used only to treat infections that are proven or strongly suspected to be caused by susceptible microorganisms. The applicant received approval from the FDA on June 25, 2018, for Plazomicin with the trade name ZEMDRI<sup>™</sup> for use in the treatment of adults with cUTIs, including pyelonephritis.

The applicant stated that there is a strong need for antibiotics that can treat infections caused by MDR Enterobacteriaceae, specifically carbapenem resistant

Enterobacteriaceae (CRE). Life-threatening infections caused by MDR bacteria have increased over the past decade, and the patient population diagnosed with infections caused by CRE is projected to double within the next 5 years, according to the Centers for Disease Control and Prevention (CDC). Infections caused by CRE are often associated with poor patient outcomes due to limited treatment options. Patients who have been diagnosed with BSIs due to CRE face mortality rates of up to 50 percent. Patients most at risk for CRE infections are those with CRE colonization, recent hospitalization or stay in a long-term care or skilled-nursing facility, an extensive history of antibacterial use, and whose care requires invasive devices like urinary catheters, intravenous (IV) catheters, or ventilators. The applicant estimated, using data from the Center for Disease Dynamics, Economics & Policy (CDDEP), that the Medicare population that has been diagnosed with antibiotic-resistant cUTI numbers approximately 207,000 and approximately 7,000 for BSIs/sepsis due to CRE.

The applicant noted that due to the public health concern of increasing antibiotic resistance and the need for new antibiotics to effectively treat MDR infections, Plazomicin has received the following FDA designations: Breakthrough Therapy; Qualified Infectious Disease Product, Priority Review; and Fast Track. The applicant noted that Breakthrough Therapy designation was granted on May 17, 2017, for the treatment of bloodstream infections (BSIs) caused by certain Enterobacteriaceae in patients who have been diagnosed with these types of infections who have limited or no alternative treatment options. The applicant noted that Plazomicin is the first antibacterial agent to receive this designation. The applicant noted that on

December 18, 2014, the FDA designated Plazomicin as a Qualified Infectious Disease Product (QIDP) for the indications of hospital-acquired bacterial pneumonia (HAPB), ventilator-associated bacterial pneumonia (VABP), and complicated urinary tract infection (cUTI), including pyelonephritis and catheter-related blood stream infections (CRBSI). The applicant noted that Fast Track designation was granted by the FDA on August 12, 2012, for the Plazomicin development program for the treatment of serious and life-threatening infections due to CRE. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20320), we indicated that Plazomicin had not received approval from the FDA as of the time of the development of the proposed rule. However, as noted previously, the applicant received approval from the FDA on June 25, 2018, for Plazomicin with the trade name ZEMDRI™ for use in the treatment of adults with cUTIs, including pyelonephritis. We note that, for the remainder of this discussion in this final rule, the two technology names are referenced interchangeably. The applicant did not receive FDA approval for use in the treatment of BSIs.

The applicant's request for approval for a unique ICD-10-PCS procedure code to identify the use of ZEMDRI™ was granted, and the following procedure codes:

XW033G4 (Introduction of Plazomicin anti-infective into peripheral vein, percutaneous approach, new technology group 4) and XW043G4 (Introduction of Plazomicin anti-infective into central vein, percutaneous approach, new technology group 4) are effective October 1, 2018.

As discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant asserted that Plazomicin does not use the same or similar mechanism of action to achieve a therapeutic outcome as any other drug assigned to the same or a different MS-DRG. The applicant stated that Plazomicin has a unique chemical structure designed to improve activity against aminoglycoside-resistant bacteria, which also are often resistant to other key classes of antibiotics, including beta-lactams and carbapenems. Bacterial resistance to aminoglycosides usually occurs through enzymatic modification by aminoglycoside modifying enzymes (AMEs) to compromise binding the target bacterial site. According to the applicant, AMEs were found in 98.6 percent of aminoglycoside nonsusceptible *E. coli*, *Klebsiella* spp, *Enterobacter* spp, and *Proteus* spp collected in 2016 U.S. surveillance studies. Genes encoding AMEs are typically located on elements that also carry other causes of antibiotic resistance like B-lactamase and/or carbapenemase genes. Therefore, extended spectrum beta-lactamases (ESBL) producing Enterobacteriaceae and CRE are commonly resistant to currently available aminoglycosides. According to the applicant, Plazomicin contains unique structural modifications at key positions in the molecule to overcome antibiotic resistance, specifically at the 6 and N1 positions. These side chain substituents shield Plazomicin from inactivation by AMEs, such that Plazomicin is not inactivated by any known AMEs, with the exception of

N-acetyltransferase (AAC) 2'-Ia, -Ib, and -Ic, which is only found in *Providencia* species. According to the applicant, as an aminoglycoside, Plazomicin also is not hydrolyzed by B-lactamase enzymes like ESBLs and carbapenamases. Therefore, the applicant asserted that Plazomicin is a potent therapeutic agent for treating MDR Enterobacteriaceae, including aminoglycoside-resistant isolates, CRE strains, and ESBL-producers.

The applicant asserted that the mechanism of action is new due to the unique chemical structure. With regard to the general mechanism of action against bacteria, in the proposed rule, we stated we were concerned that the mechanism of action of Plazomicin appeared to be similar to other aminoglycoside antibiotics. As with other aminoglycosides, Plazomicin is bactericidal through inhibition of bacterial protein synthesis. The applicant maintained that the structural changes to the antibiotic constitute a new mechanism of action because it allows the antibiotic to remain active despite AMEs. Additionally, the applicant stated that Plazomicin would be the first, new aminoglycoside brought to market in over 40 years.

We invited public comments on whether Plazomicin's mechanism of action is new, including comments in response to our concern that its mechanism of action to eradicate bacteria (inhibition of bacterial protein synthesis) may be similar to that of other aminoglycosides, even if improvements to its structure may allow Plazomicin to be active even in the presence of common AMEs that inactivate currently marketed aminoglycosides.

Comment: The applicant stated, in response to CMS' concern, that ZEMDRI™'s (Plazomicin's) mechanism of action is not substantially similar to that of existing

aminoglycosides because modifications in the chemical structure allow ZEMDRI™ to both withstand resistance and reach the target site of action for antibacterial efficacy. The applicant indicated that ZEMDRI™ is the first intravenous (IV) aminoglycoside approved by the FDA in over 35 years that uses a protein synthesis as its target site, combined with unique structural modifications that withstand bacterial resistance mechanisms that render currently marketed aminoglycosides ineffective. The applicant believed that consideration of the mechanism of action for antibiotics should include how it defends itself against inactivation by the bacteria, in addition to how it kills the bacteria because the increasing emergence of antibiotic resistance requires that new drugs not only exert bactericidal action, but also how the new drugs overcome bacterial resistance. The applicant stated that the ability of an antibiotic to withstand resistance is equally important as the ability to work at the target site because without the first action, the latter would not matter. Therefore, the applicant posited that, while ZEMDRI™'s mechanism of bacterial killing is similar to other aminoglycosides, its ability to withstand antibiotic resistance due to AMEs is substantially different and represents an improvement in the treatment of patients diagnosed with serious gram-negative bacterial infections. The applicant indicated that, in the event of resistance, the antibiotic cannot kill the bacteria without further extension of mechanisms to protect against this resistance, regardless of its site of action. The applicant stated that other aminoglycosides, in contrast to ZEMDRI™, do not have the modifications that allow them to withstand common mechanisms of resistance and, thereby, cannot bind to the target site of antibacterial action and are inactive. The applicant further explained that, specifically, the structural

modifications in Plazomicin protects the antibiotic from most AMEs produced by bacteria that inactivates other aminoglycosides including gentamicin, tobramycin, and amikacin. The applicant stated that ZEMDRI™ inhibits 90 percent of the Enterobacteriaceae, including those resistant to one or more aminoglycoside antibiotics at a concentration of  $\leq 4$  mcg/mL (the proposed breakpoint for Plazomicin). The applicant also noted that ZEMDRI™ is already protected by at least four issued patents in the U.S., representing the general innovative and novel characteristics of the compound.

Another commenter noted that CMS' concerns focused on commonalities between Plazomicin and other antibiotics in the same general antibiotic class, and stated that the unique benefits of this medicine should not be ignored due to the substantial similarities to other medicines, given the recognized shortage of new antibiotics.

Response: We appreciate the applicant and the commenter's input regarding the technology. After consideration of the comments we received from the applicant regarding ZEMDRI™'s mechanism of action, we agree that ZEMDRI™'s ability to withstand antibiotic resistance is a critical component of its mechanism of action because it enables the antibiotic to effectively inhibit bacterial protein synthesis despite aminoglycoside resistance.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, we believe that potential cases representing patients who may be eligible for treatment involving Plazomicin would be assigned to the same MS-DRGs as cases representing patients who receive treatment for UTI or bacteremia.

Comment: The applicant agreed with CMS and stated that use of ZEMDRI™ will not change the MS-DRG assignment for potential cases representing eligible patients.

Response: We appreciate the applicant's input. We note that, the FDA approval for ZEMDRI™ was only for the treatment of patients 18 years of age or older who have been diagnosed with a cUTI, including pyelonephritis, and not for the other proposed indication of bacteremia/BSI. Therefore, we are only considering the MS-DRG assignment for potential cases representing eligible patients for the approved indication.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, we indicated in the proposed rule that the applicant asserted that Plazomicin is intended for use in the treatment of patients who have been diagnosed with cUTI, including pyelonephritis, and bloodstream infections, who have limited or no alternative treatment options. We stated that because the applicant anticipated that Plazomicin would be reserved for use in the treatment of patients who have limited or no alternative treatment options, the applicant believed that Plazomicin may be indicated to treat a new patient population for which no other technologies are available. However, we stated that it is possible that existing antimicrobials could also be used to treat those same bacteria Plazomicin is intended to treat. Specifically, we indicated that the applicant was seeking FDA approval for use in the treatment of patients who have been diagnosed with cUTI, including pyelonephritis, caused by the following susceptible microorganisms:

*Escherichia coli* (including cases with concurrent bacteremia), *Klebsiella pneumoniae*, *Proteus* spp (including *P. mirabilis* and *P. vulgaris*), and *Enterobacter cloacae*, and for

use in the treatment of patients who have been diagnosed with BSIs caused by the following susceptible microorganisms: *Klebsiella pneumonia* and *Escherichia coli*. We stated that because the susceptible organisms for which Plazomicin was proposed to be indicated include nonresistant strains that existing antibiotics may effectively treat, we were concerned that Plazomicin may not treat a new patient population. Therefore, we invited public comments on whether Plazomicin treats a new type of disease or a new patient population. We also invited public comments on whether Plazomicin is substantially similar to any existing technologies and whether it meets the newness criterion. As noted previously, Plazomicin received approval with the trade name ZEMDRI™ for use in the treatment of patients 18 years of age or older with cUTI, including pyelonephritis.

Comment: The applicant disagreed with CMS' concern that ZEMDRI™ may not treat a new patient population, and stated that most existing antibiotics are *not* effective against MDR strains of bacteria, especially extended spectrum b-lactamase (ESBL)-producing Enterobacteriaceae and CRE. The applicant further stated that, because of the FDA's methodology for determining antibiotic labels and indication of bacteria, ZEMDRI™ is indicated for resistant and also nonresistant strains of bacteria, but the FDA label approving ZEMDRI™ for the treatment of diagnoses of cUTIs, including pyelonephritis, includes the following statement limiting the indication to a new patient population: as only limited clinical safety and efficacy data are available, reserve ZEMDRI™ for use in patients who have limited or no alternative treatment options. The applicant further indicated that ZEMDRI™ treats a new patient population because

patients infected with pathogens that are resistant to other antibiotics include patients with infections due to CRE, which is considered “untreatable” or “hard to treat” by the CDC. The applicant emphasized that the CDC cautions that CRE infections are increasing and resistant to “all or nearly all” antibiotics. The applicant stated that ZEMDRI™ meets CMS’ criterion for newness by providing, due to its mechanism to withstand resistance and its potent activity against CRE considered by the CDC as “untreatable”, a new treatment choice for a patient population that may not have a viable option for a cure.

Several other commenters supported the approval of new technology add-on payments for Plazomicin, and believed that Plazomicin treats a new patient population with very limited treatment options. The commenters specifically indicated that there is a need for new antibiotics to combat the crisis of multi-drug resistant bacteria, especially CRE infections. The commenters stated that there at least 70,000 cases of CRE annually in the United States, and the number is expected to double in 4 years. The commenters also noted that the CDC estimates that CRE infections are associated with mortality rates of up to 50 percent and occur in the most medically vulnerable patient populations. The commenters further recommended CMS acknowledge that as these organisms are becoming resistant to last-line antibiotic drugs, clinicians frequently face infections with no realistic treatment options for patients. The commenters also indicated that the CDC identified CRE as one of the three urgent drug-resistant threats to human health, and issued warning that without urgent action more patients will be “thrust back to a time before we had effective drugs.” Another commenter also noted that the World Health

Organization identified CRE as one of the three pathogens with the highest priority for research and development of novel antimicrobials, and stated that Plazomicin is new because it has demonstrated superiority over historic regimens for the management of invasive CRE infections.

The applicant and other commenters also stated that, even with newly approved antibiotic products with activity against some CRE, development of resistance has already been reported resulting in patients having no other available treatment options. The applicant and other commenters further stated that there is a need for more than one effective antibiotic active against CRE for many reasons, including various patient characteristics such as drug allergies, source location of bacteria, and the need for two active antibiotics given at the same time—a common practice for multi-drug or pan-drug resistance. Therefore, the commenters believed that multiple antibiotic treatment options are necessary and the existence of other effective antibiotics does not preclude a new antibiotic such as ZEMDRI™ from representing an improved benefit for a patient population with limited or no other available treatment options.

Another commenter stated that it, generally, supported CMS' concerns regarding the substantial similarity criteria for Plazomicin.

Response: We appreciate the applicant's and other commenters' input on whether ZEMDRI™ treats a new patient population. We understand that antibiotic resistance poses a significant threat to human health and that clinicians seek new antibiotics to treat multi-drug resistant infections, particularly those caused by CRE. Regarding our concern that ZEMDRI™ is indicated for resistant and also nonresistant strains of bacteria, we

believe the FDA label approving ZEMDRI™ for the treatment of adult patients diagnosed with a cUTI, including pyelonephritis, addresses this concern by reserving ZEMDRI™ for use in patients who have limited or no alternative treatment options.

After consideration of the public comments we received, we believe that the mechanism of action for ZEMDRI™ is new, as discussed above. Therefore, we believe that ZEMDRI™ is not substantially similar to any existing technologies and consequently meets the newness criterion. We consider the beginning of the newness period to commence when ZEMDRI™ was approved by the FDA on June 25, 2018.

With regard to the cost criterion, the applicant conducted the following analysis to demonstrate that the technology meets the cost criterion. The analyses submitted by the applicant and presented in the proposed rule and below were for the indications of cUTI and BSI because the applicant was seeking FDA approval for both indications. However, as noted earlier, the technology was only approved for use in the treatment of cUTI, including pyelonephritis. Therefore, while we summarize both analyses below, as presented in the proposed rule, we note that only the cost information related to cUTI is evaluated to demonstrate that the applicant meets the cost criterion. We stated in the proposed rule that in order to identify the range of MS-DRGs that potential cases representing patients who have been diagnosed with the specific types of infections for which the technology had been proposed to be indicated for use in the treatment of and who may be potentially eligible for treatment involving Plazomicin may map to, the applicant identified all MS-DRGs in claims that included cases representing patients who have been diagnosed with UTI or Septicemia. The applicant searched the FY 2016

MedPAR data for claims reporting 16 ICD-10-CM diagnosis codes for UTI and 45 ICD-10-CM diagnosis codes for Septicemia and identified a total of 2,046,275 cases assigned to 702 MS-DRGs. The applicant also performed a similar analysis based on 75 percent of identified claims, which spanned 43 MS-DRGs. MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours with MCC) accounted for roughly 25 percent of all cases in the first analysis of the 702 MS-DRGs identified, and almost 35 percent of the cases in the second analysis of the 43 MS-DRGs identified. Other MS-DRGs with a high volume of cases based on mapping the ICD-10-CM diagnosis codes, in order of number of discharges, were: MS-DRG 872 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours without MCC); MS-DRG 690 (Kidney and Urinary Tract Infections without MCC); MS-DRG 689 (Kidney and Urinary Tract Infections with MCC); MS-DRG 853 (Infectious and Parasitic Diseases with O.R. Procedure with MCC); and MS-DRG 683 (Renal Failure with CC).

For the cost analysis summarized in the proposed rule, the applicant calculated an average unstandardized case-weighted charge per case using 2,046,275 identified cases (100 percent of all cases) and using 1,533,449 identified cases (75 percent of all cases) of \$69,414 and \$63,126, respectively. The applicant removed 50 percent of the charges associated with other drugs (associated with revenue codes 025x, 026x, and 063x) from the MedPAR data because the applicant anticipated that the use of Plazomicin would reduce the charges associated with the use of some of the other drugs, noting that this was a conservative estimate because other drugs would still be required for these patients during their hospital stay. The applicant then standardized the charges and applied the

2-year inflation factor of 9.357 percent from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527) to inflate the charges from FY 2016 to FY 2018. No charges for Plazomicin were added in the analysis because the applicant explained that the anticipated price for Plazomicin had yet to be determined. Based on the FY 2018 IPPS/LTCH PPS Table 10 thresholds, the average case-weighted threshold amount was \$56,996 in the first scenario utilizing 100 percent of all cases, and \$55,363 in the second scenario utilizing 75 percent of all cases. The inflated average case-weighted standardized charge per case was \$62,511 in the first scenario and \$57,054 in the second analysis. Because the inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount in both scenarios, the applicant maintained that the technology met the cost criterion. The applicant noted that the case-weighted threshold amount is met before including the average per patient cost of the technology in both analyses. As such, the applicant anticipated that the inclusion of the cost of Plazomicin, at any price point, would further increase charges above the average case-weighted threshold amount.

The applicant also supplied additional cost analyses that we summarized in the proposed rule, directing attention at each of the two proposed indications individually; the cost analyses considered potential cases representing patients who have been diagnosed with cUTI who may be eligible for treatment involving Plazomicin separately from potential cases representing patients who have been diagnosed with BSI/Bacteremia who may be eligible for treatment involving Plazomicin, with the cost analysis for each considering 100 percent and 75 percent of identified cases using the FY 2016 MedPAR data and the FY 2018 GROUPER Version 36. For the additional cost analyses

summarized in the proposed rule, the applicant reported that, for potential cases representing patients who have been diagnosed with Bacteremia and who may be eligible for treatment involving Plazomicin, 100 percent of identified cases spanned 539 MS-DRGs, with 75 percent of the cases mapping to the following 4 MS-DRGs: 871 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours with MCC), 872 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours without MCC), 853 (Infectious and Parasitic Diseases with O.R. Procedure with MCC), and 870 (Septicemia or Severe Sepsis with Mechanical Ventilation 96+ hours).

According to the applicant, for potential cases representing patients who have been diagnosed with cUTI and who may be eligible for treatment involving Plazomicin, 100 percent of identified cases mapped to 702 MS-DRGs, with 75 percent of the cases mapping to 56 MS-DRGs. Potential cases representing patients who have been diagnosed with cUTIs and who may be eligible for treatment involving Plazomicin assigned to MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours with MCC) accounted for approximately 18 percent of all of the cases assigned to any of the identified 56 MS-DRGs (75 percent of cases sensitivity analysis), followed by MS-DRG 690 (Kidney and Urinary Tract Infections without MCC), which comprised almost 13 percent of all of the cases assigned to any of the identified 56 MS-DRGs. Two other common MS-DRGs containing potential cases representing potential patients who may be eligible for treatment involving Plazomicin who have been diagnosed with the specific type of indicated infections for which the technology is intended to be used, using the applicant's analysis approach for UTI based on mapping the ICD-10-CM

diagnosis codes were: MS-DRG 872 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours without MCC) and MS-DRG 689 (Kidney and Urinary Tract Infections with MCC).

According to the applicant's analyses submitted prior to the FDA approval, as stated in the proposed rule, for potential cases representing patients who have been diagnosed with BSI and who may be eligible for treatment involving Plazomicin, the applicant calculated the average unstandardized case-weighted charge per case using 1,013,597 identified cases (100 percent of all cases) and using 760,332 identified cases (75 percent of all cases) of \$87,144 and \$67,648, respectively. The applicant applied the same methodology as the combined analysis above. Based on the FY 2018 IPPS/LTCH PPS final rule Table 10 thresholds, the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with BSI assigned to the MS-DRGs identified in the sensitivity analysis was \$66,568 in the first scenario utilizing 100 percent of all cases, and \$61,087 in the second scenario utilizing 75 percent of all cases. The inflated average case-weighted standardized charge per case was \$77,004 in the first scenario and \$60,758 in the second scenario; in the 100 percent of Bacteremia cases sensitivity analysis, the final inflated case-weighted standardized charge per case exceeded the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with BSI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the sensitivity analysis by \$10,436 before including costs of Plazomicin. In the 75 percent of all cases sensitivity analysis scenario, the final inflated case-weighted standardized charge per case did not

exceed the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with BSI assigned to the MS-DRGs identified in the sensitivity analysis, at \$329 less than the average case-weighted threshold amount. In the proposed rule, we noted that because the applicant had not yet determined pricing for Plazomicin, however, it is possible that Plazomicin may also exceed the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with BSI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 75 percent cases sensitivity analysis.

For potential cases representing patients who have been diagnosed with cUTI and who may be eligible for treatment involving Plazomicin, the applicant calculated the average unstandardized case-weighted charge per case using 100 percent of all cases and 75 percent of all cases of \$59,908 and \$48,907, respectively. The applicant applied the same methodology as the combined analysis above. Based on the FY 2018 IPPS/LTCH PPS final rule Table 10 thresholds, the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the first scenario utilizing 100 percent of all cases was \$51,308, and \$46,252 in the second scenario utilizing 75 percent of all cases. The inflated average case-weighted standardized charge per case was \$53,868 in the first scenario and \$45,185 in the second scenario. In the 100 percent of cUTI cases sensitivity analysis, the final inflated case-weighted standardized charge per case exceeded the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with

cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 100 percent of all cases sensitivity analysis by \$2,560 before including costs of Plazomicin. In the 75 percent of all cases scenario, the final inflated case-weighted standardized charge per case did not exceed the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 75 percent sensitivity analysis, at \$1,067 less than the average case-weighted threshold amount. In the proposed rule, we noted that because the applicant had not yet determined pricing for Plazomicin, however, it is possible that Plazomicin may also exceed the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 75 percent of all cases sensitivity analysis if charges for Plazomicin are more than \$1,067. We invited public comments on whether Plazomicin meets the cost criterion.

We note that the FDA approval for ZEMDRI™ was only for the treatment of adults with complicated urinary tract infections cUTI, including pyelonephritis, and not for the other proposed indication of BSI. Therefore, we are only considering the cost analysis supplied by the applicant which considered potential cases representing patients who have been diagnosed with cUTI who may be eligible for treatment involving Plazomicin.

Comment: The applicant believed that ZEMDRI™ met the cost criterion, but supplied additional information that included the pricing for ZEMDRI™ to update the

cost threshold analyses presented in the proposed rule. The applicant noted in supplemental information submitted to CMS the WAC of ZEMDRI™ (which is supplied as 500mg/10ml (50mg/mL) solution in a single dose vial) is \$330 per vial. The applicant indicated that the recommended dosage for ZEMDRI™ is 15mg/kg, every 24 hours administered as an IV infusion based on patient weight. The applicant stated that, because each vial contains 1,000 mg of ZEMDRI™, a single vial provides the complete recommended dose for a single patient who weighs 100 kg or less. The applicant predicted that patients will typically require 3 vials for the course of treatment with ZEMDRI™ per day, and the average duration of ZEMDRI™ therapy is 5.5 days. Therefore, the applicant stated that the total cost of ZEMDRI™ per patient is \$5,445. The applicant utilized the national CCR for “Drugs” as listed in the FY 2018 IPPS/LTCH PPS final rule to estimate hospital charges by dividing the total cost per patient by the CCR ( $\$5,445/0.194$ ).

The applicant also updated the cost threshold analysis including hospital charges for ZEMDRI™. The applicant’s updated analysis applied only to those ICD-10-CM diagnosis codes used to identify cases representing patients who have been diagnosed with a cUTI and who may be eligible for treatment involving ZEMDRI™. The applicant included two scenarios considering 100 percent of identified cases mapping to 702 MS-DRGs and 75 percent of identified cases mapping to 56 MS-DRGs using the FY 2016 MedPAR data and the FY 2018 GROUPER Version 36. The applicant stated that, as discussed in the FY 2019 IPPS/LTCH PPS proposed rule, potential cases representing patients who have been diagnosed with cUTIs and who may be eligible for

treatment involving Plazomicin assigned to MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours with MCC) accounted for approximately 18 percent of all of the cases assigned to any of the identified 56 MS-DRGs (75 percent of cases sensitivity analysis), followed by MS-DRG 690 (Kidney and Urinary Tract Infections without MCC), which comprised almost 13 percent of all of the cases assigned to any of the identified 56 MS-DRGs. The applicant further stated that the two other common MS-DRGs containing potential cases representing potential patients who may be eligible for treatment involving Plazomicin who have been diagnosed with the specific type of indicated infections for which the technology is intended to be used, using the applicant's analysis approach for UTI based on mapping the ICD-10-CM diagnosis codes were: MS-DRG 872 (Septicemia or Severe Sepsis without Mechanical Ventilation 96+ hours without MCC) and MS-DRG 689 (Kidney and Urinary Tract Infections with MCC).

Consistent with the analysis submitted for the proposed rule, the applicant calculated the average unstandardized case-weighted charge per case using 100 percent of all cases and 75 percent of all cases of \$59,908 and \$48,907, respectively. Consistent with the analysis submitted for the proposed rule, based on the FY 2018 IPPS/LTCH PPS final rule Table 10 thresholds, the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with a cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the first scenario utilizing 100 percent of all cases was \$51,308, and \$46,252 in the second scenario utilizing 75 percent of all cases. The applicant utilized the same methodology

described in the FY 2019 IPPS/LTCH PPS proposed rule with the exception of adding charges for Plazomicin. The applicant removed 50 percent of the charges associated with other drugs (associated with revenue codes 025x, 026x, and 063x), then standardized the charges and applied the 2-year inflation factor of 9.357 percent from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38527) to inflate the charges from FY 2016 to FY 2018. After adding the charges for Plazomicin, the inflated average case-weighted standardized charge per case was \$81,935 in the first scenario and \$73,252 in the second scenario. The applicant indicated that, in the 100 percent of cUTI cases sensitivity analysis, the final inflated case-weighted standardized charge per case exceeded the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with a cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 100 percent of all cases sensitivity analysis by \$30,627 after including the cost of Plazomicin. The applicant further stated that, in the 75 percent of all cases scenario, the final inflated case-weighted standardized charge per case exceeded the average case-weighted threshold amount for potential cases representing patients who have been diagnosed with a cUTI and who may be eligible for treatment involving Plazomicin assigned to the MS-DRGs identified in the 75 percent sensitivity analysis by \$27,000 after including the cost of Plazomicin. In both scenarios, the final inflated case-weighted standardized charge per case exceeded the average case-weighted threshold amount and, therefore, the applicant believed that ZEMDRI™ continued to meet the cost criterion.

Response: We appreciate the additional information received from the applicant regarding the cost of ZEMDRI™ and whether the technology meets the cost criterion. After consideration of the public comments we received, we agree that ZEMDRI™ meets the cost criterion.

With respect to the substantial clinical improvement criterion, the applicant asserted that Plazomicin is a next generation aminoglycoside that offers a treatment option for a patient population who have limited or no alternative treatment options. Patients who have been diagnosed with BSI or cUTI caused by MDR Enterobacteria, particularly CRE, are difficult to treat because carbapenem resistance is often accompanied by resistance to additional antibiotic classes. For example, CRE may be extensively drug resistant (XDR) or even pandrug resistant (PDR). CRE are resistant to most antibiotics, and sometimes the only treatment option available to health care providers is a last-line antibiotic (such as colistin and tigecycline) with higher toxicity. According to the applicant, Plazomicin would give the clinician an alternative treatment option for patients who have been diagnosed with MDR bacteria like CRE because it has demonstrated activity against clinical isolates that possess a broad range of resistance mechanisms, including ESBLs, carbapenemases, and aminoglycoside modifying enzymes that limit the utility of different classes of antibiotics. Plazomicin also can be used to treat patients who have been diagnosed with BSI caused by resistant pathogens, such as ESBL-producing Enterobacteriaceae, CRE, and aminoglycoside-resistant Enterobacteriaceae. The applicant maintained that Plazomicin is a substantial clinical improvement because it offers a treatment option for patients who have been diagnosed

with serious bacterial infections that are resistant to current antibiotics. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20322), we noted that Plazomicin is not indicated exclusively for resistant bacteria, but rather for certain susceptible organisms of gram-negative bacteria, including resistant and nonresistant strains for which existing antibiotics may be effective. We stated we were concerned that the applicant focused solely on Plazomicin's activity for resistant bacteria and did not supply information demonstrating substantial clinical improvement in treating nonresistant strains in the bacteria families for which Plazomicin is indicated. We note that because the FDA approval was for the cUTI indication only, and not the BSI proposed indication, we are only summarizing comments pertaining to the cUTI indication and evaluating whether ZEMDRI™ meets the substantial clinical improvement criterion for use in the treatment of cUTI.

Comment: The applicant stated in response to CMS' concerns that the EPIC study evaluated the efficacy of ZEMDRI™ against both susceptible and resistant organisms (ESBLs) in cUTIs against a highly potent antibiotic, meropenem. The applicant noted that, although in this study approximately 25 percent of the isolates were beta-lactamase producers (ESBL), which are resistant to commonly used antibiotics such as penicillins and cephalosporins, the remaining 75 percent were susceptible to beta-lactam antibiotics (non-ESBL). Therefore, the applicant indicated that, while ZEMDRI™'s substantial clinical benefit was particularly differentiated in patients with infections due to MDR pathogens where limited or no alternative therapies are available, ZEMDRI™ also demonstrated a clinical improvement in patients diagnosed with a cUTI,

including acute pyelonephritis, against pathogens that are susceptible to other antibiotics. The applicant emphasized that the approved FDA label fully addresses this concern because it restricts the use of ZEMDRI™ to patients diagnosed with a cUTI, including pyelonephritis, who have limited or no alternative treatment options. The applicant stated that the FDA labeling ensures that ZEMDRI™ is used exclusively to treat patients diagnosed with infections due to resistant bacteria and will result in ZEMDRI™'s use in the treatment of patients where the benefit outweighs the risk, which includes patients with infections due to resistant pathogens such as ESBL-producing Enterobacteriaceae, non-susceptible to other currently marketed aminoglycosides, and CRE when other antibiotics cannot be used.

Response: We agree with the applicant that the FDA label addresses this concern because it restricts the use of ZEMDRI™ to patients diagnosed with a cUTI, including pyelonephritis, who have limited or no alternative treatment options.

The applicant stated that Plazomicin also meets the substantial clinical improvement criterion because it significantly improves clinical outcomes for a patient population compared to currently available treatment options. Specifically, the applicant asserted that Plazomicin has: (1) a mortality benefit and improved safety profile in treating patients who have been diagnosed with BSI due to CRE; and (2) statistically better outcomes at test-of-cure in patients who have been diagnosed with cUTI, including higher eradication rates for ESBL-producing pathogens, and lower rate of subsequent clinical relapses. The applicant conducted two Phase III studies, CARE and EPIC. The CARE trial compared Plazomicin to colistin, a last-line antibiotic that is a standard of

care agent for patients who have been diagnosed with BSI when caused by CRE. The EPIC trial compared Plazomicin to meropenem for the treatment of patients who have been diagnosed with cUTI/acute pyelonephritis.

The CARE clinical trial was a randomized, open label, multi-center Phase III study comparing the efficacy of Plazomicin against colistin in the treatment of patients who have been diagnosed with BSIs or hospital-acquired bacterial pneumonia (HABP)/ventilator-acquired bacterial pneumonia (VABP) due to CRE. Due to the small number of enrolled patients with HABP/VABP, however, results were only analyzed for patients who had been diagnosed with BSI due to CRE. The primary endpoint was day 28 all-cause mortality or significant disease complications. Patients were randomized to receive 7 to 14 days of IV Plazomicin or colistin, along with an adjunctive therapy of meropenem or tigecycline. All-cause mortality and significant disease complications were consistent regardless of adjunctive antibiotics received, suggesting that the difference in outcomes was driven by Plazomicin and colistin, with little impact from meropenem and tigecycline. Follow-up was done at test-of-cure (TOC; 7 days after last dose of IV study drug), end of study (EOS; day 28), and long-term follow-up (LFU; day 60). Safety analysis included all patients; microbiological modified intent-to-treat (mMITT) analysis included 17/18 Plazomicin and 20/21 colistin patients. Baseline characteristics like age, gender, APACHE II score, infection type, baseline pathogens, creatinine clearance, and adjunctive therapy with either meropenem or tigecycline were comparable in the Plazomicin and colistin groups.

According to the applicant, the following results demonstrate a reduced mortality benefit in the patients who had been diagnosed with BSI subset. All-cause mortality at day 28 in the Plazomicin group was more than 5 times less than in the colistin group and all-cause mortality or significant complications at day 28 was reduced by 39 percent in the Plazomicin group compared to the colistin group. There was a large sustained 60-day survival benefit in the patients who had been diagnosed with BSI subset, with survival approximately 70 percent in the Plazomicin group compared to 40 percent in the colistin group. Additionally, according to the applicant, faster median time to clearance of CRE bacteremia of 1.5 versus 6 days for Plazomicin versus colistin and higher rate of documented clearance by day 5 (86 percent versus 46 percent) supported the reduced mortality benefit due to faster and more sustained clearance of bacteremia and also demonstrated clinical improvement in terms of more rapid beneficial resolution of the disease.

The applicant maintained that Plazomicin also represents a substantial clinical improvement in improved safety outcomes. Patients treated with Plazomicin had a lower incidence of renal events (10 percent versus 41.7 percent when compared to colistin), fewer Treatment Emergent Adverse Events (TEAEs), specifically blood creatinine increases and acute kidney injury, and approximately 30 percent fewer serious adverse events were in the Plazomicin group. According to the applicant, other substantial clinical improvements demonstrated by the CARE study for use of Plazomicin in patients who had been diagnosed with BSI included lower rate of superinfections or new

infections, occurring in half as many patients treated with Plazomicin versus colistin (28.6 percent versus 66.7 percent).

According to the applicant, the CARE study demonstrates decreased all-cause mortality and significantly reduced disease complications at day 28 (EOS) and day 60 for patients who had been diagnosed with BSI, in addition to a superior safety profile to colistin. However, the applicant stated that, with the achieved enrollment, this study was not powered to support formal hypothesis testing and p-values and 90 percent confidence intervals are provided for descriptive purposes. The total number of patients who had been diagnosed with BSI was 29, with 14 receiving Plazomicin and 15 receiving colistin. While we understand the difficulty enrolling a large number of patients who have been diagnosed with BSI caused by CRE due to severity of the illness and the need for administering treatment promptly, we stated in the proposed rule we were concerned that results indicating reduced mortality and treatment advantages over existing standard of care for patients who have been diagnosed with BSI due to CRE are not statistically significant due to the small sample size. Therefore, we stated that we were concerned that the results from the CARE study cannot be used to support substantial clinical improvement.

Comment: A commenter agreed with CMS' assessment that results of the CARE study are not statistically significant due to the small sample size of 29 patients.

Response: We appreciate the commenter's input. However, we note that, we are no longer evaluating whether ZEMDRI™ meets the substantial clinical improvement

criterion for use in the treatment of patients diagnosed with BSI because the FDA did not approve ZEMDRI™ for that proposed indication.

The EPIC clinical trial was a randomized, multi-center, multi-national, double-blind study evaluating the efficacy and safety of Plazomicin compared with meropenem in the treatment of patients who have been diagnosed with cUTI based on composite cure endpoint (achieving both microbiological eradication and clinical cure) in the microbiological modified intent-to-treat (mMITT) population. Patients received between 4 to 7 days of IV therapy, followed by optional oral therapy like levofloxacin (or any other approved oral therapy) as step down therapy for a total of 7 to 10 days of therapy. Test-of-cure (TOC) was done 15 to 19 days and late follow-up (LFU) 24 to 32 days after the first dose of IV therapy. Six hundred nine patients fulfilled inclusion criteria, and were randomized to receive either Plazomicin or meropenem, with 306 patients receiving Plazomicin and 303 patients receiving meropenem. Safety analysis included 303 (99 percent) Plazomicin patients and 301 (99.3 percent) meropenem patients. mMITT analysis included 191 (62.4 percent) Plazomicin patients and 197 (65 percent) meropenem patients; exclusion from mMITT analysis was due to lack of study-qualifying uropathogen, which were pathogens susceptible to both Plazomicin and meropenem. In the mMITT population, both groups were comparable in terms of gender, age, percentage of patients who had been diagnosed with cUTI/acute pyelonephritis (AP)/urosepsis/bacteremia/moderate renal impairment at baseline.

According to the applicant, Plazomicin successfully achieved the primary efficacy endpoint of composite cure (combined microbiological eradication and clinical cure). At

the TOC visit, 81.7 percent of Plazomicin patients versus 70.1 percent of meropenem patients achieved composite cure; this was statistically significant with a 95 percent confidence interval. Plazomicin also demonstrated higher eradication rates for key resistant pathogens than meropenem at both TOC (89.4 percent versus 75.5 percent) and LFU (77 percent versus 60.4 percent), suggesting that the Plazomicin treatment benefit observed at TOC was sustained. Specifically, Plazomicin demonstrated higher eradication rates, defined as baseline uropathogen reduced to less than 10<sup>4</sup>, against the most common gram-negative uropathogens, including ESBL producing (82.4 percent Plazomicin versus 75.0 percent meropenem) and aminoglycoside resistant (78.8 percent Plazomicin versus 68.6 percent meropenem) pathogens. This was statistically significant, although of note, as total numbers of Enterobacteriaceae exceeded population of mMITT (191 Plazomicin, 197 meropenem) this presumably included patients who were otherwise excluded from the mMITT population.

According to the applicant, importantly, higher microbiological eradication rates at the TOC and LFU visits were associated with a lower rate of clinical relapse at LFU for Plazomicin treated patients (3 versus 14, or 1.8 percent Plazomicin versus 7.9 percent meropenem), with majority of the meropenem failures having had asymptomatic bacteriuria; that is, positive urine cultures without clinical symptoms, at TOC (21.1 percent), suggesting that the higher microbiological eradication rate at the TOC visit in Plazomicin-treated patients decreased the risk of subsequent clinical relapse. Plazomicin decreased recurrent infection by four-fold compared to meropenem, suggesting improved patient outcomes, such as reduced need for additional therapy and re-hospitalization for

patients who have been diagnosed with cUTI. The safety profile of Plazomicin compared to meropenem was similar. The applicant noted that higher bacteria eradication results for Plazomicin were not due to meropenem resistance, as only patients with isolates susceptible to both drugs were included in the study. According to the applicant, the EPIC clinical trial results demonstrate clear differentiation of Plazomicin from meropenem, an agent considered by some as a gold-standard for treatment of patients who have been diagnosed with cUTI in cases due to resistant pathogens.

While the EPIC clinical trial was a non-inferiority study, the applicant contended that statistically significant improved outcomes and lower clinical relapse rates for patients treated with Plazomicin demonstrate that Plazomicin meets the substantial clinical improvement criterion for the cUTI indication. Specifically, according to the applicant, the efficacy results for Plazomicin combined with a generally favorable safety profile provide a compelling benefit-risk profile for patients who have been diagnosed with cUTI, and particularly those with infections due to resistant pathogens. Most patients enrolled in the EPIC clinical trial were from Eastern Europe. We expressed in the proposed rule that it is unclear how generalizable these results would be to patients in the United States as the susceptibilities of bacteria vary greatly by location. The applicant maintained that this is consistent with prior studies and is unlikely to have affected the results of the study because the pharmacokinetics of Plazomicin and meropenem are not expected to be affected by race or ethnicity. However, bacterial resistance can vary regionally and, in the proposed rule, we expressed that we are interested in how this data can be extrapolated to a majority of the U.S. population.

Comment: A commenter agreed with CMS' concern that results from the EPIC clinical trial are predominately based on patients enrolled in trials in Eastern Europe, and it is not clear how generalizable their results would be to patients in the United States. The applicant stated that the representation of the patients enrolled in the EPIC trial was similar to other recent cUTI studies for drugs approved in the U.S., and the spectrum of diagnoses and bacteriology in these studies were representative of the epidemiology and standard-of-care used in the United States. The applicant further noted that the primary analysis excluded pathogens resistant to either study drugs (ZEMDRI™ or meropenem) and, therefore, avoided imbalances due to geographic differences in resistance. The applicant also provided additional data to demonstrate that the results from the EPIC trial are generalizable to patients treated in the U.S. because the susceptibilities of bacteria to ZEMDRI™ do not vary between patients in the U.S. versus patients in Eastern Europe, and the pharmacokinetic profile of ZEMDRI™ or meropenem are not affected by race because ZEMDRI™ and meropenem are cleared almost entirely by the kidneys rather than metabolized. The applicant further indicated that, in the Phase II study of ZEMDRI™ in patients diagnosed with a cUTI (ACHN-490-009), a larger number of patients from the U.S. were enrolled and outcomes were similar to those observed in the EPIC trial.

Response: We appreciate the commenter's input and the applicant's additional explanation demonstrating the results from the EPIC trial.

We also stated that it is also unknown how quickly resistance to Plazomicin might develop. Additionally, we stated that the microbiological breakdown of the bacteria is

unknown without the full published results, and patients outside of the mMITT population were included when the applicant reported the statistically superior microbiological eradication rates of Enterobacteriaceae at TOC. In the FY 2019 IPPS/LTCH PPS proposed rule, we stated we were concerned whether there is still statistical superiority of Plazomicin in the intended bacterial targets in the mMITT.

Comment: Regarding our concern about how quickly resistance to ZEMDRI™ might develop, the applicant stated that ZEMDRI™'s limited use indication, the short duration of therapy, and oversight by the antimicrobial stewardship team will prevent development of resistance, which is often associated with widespread use of antibiotics. Specifically, the applicant indicated that, unlike broad spectrum antibacterial drugs, the FDA restrictions of ZEMDRI™'s use helps to reduce development of resistance and is consistent with antimicrobial stewardship programs recommended by the CDC. The applicant also explained that the clinical dose of 15 mg/kg administered daily was selected to reduce the risk of emergence of resistance to ZEMDRI™. The applicant further stated that, because Plazomicin is generally not inactivated by common AMEs, the primary mechanism of resistance to Plazomicin in Enterobacteriaceae is target-site modification in isolates containing 16S-RMTases, which are rarely encountered in the U.S. and do not appear to be increasing in prevalence despite decades of clinical use of aminoglycoside class; 16S-RMTases were found in only 0.08 percent or 5 of approximately 6,500 U.S. Enterobacteriaceae isolates collected during a 2014 through 2016 surveillance study.

The applicant also provided data presenting the breakdown of the uropathogens identified from baseline urine cultures in the mMITT population in the EPIC study, and clarified that statistically superior microbiological eradication rates observed with ZEMDRI™ compared to meropenem at TOC (Table 2) were achieved in the same mMITT population used for the primary endpoint.

Response: We appreciate the additional information received from the applicant explaining why ZEMDRI™ has a low potential for development of resistance and demonstrating ZEMDRI™'s statistical superiority in the intended bacterial targets in the mMITT population.

Finally, because both Plazomicin and meropenem were also utilized in conjunction with levofloxacin, we stated in the proposed rule that it is unclear to us whether combined antibiotic therapy will continue to be required in clinical practice, and how levofloxacin activity or resistance might affect the clinical outcome in both patient groups.

Comment: The applicant clarified that levofloxacin was provided only as an optional oral step-down therapy after pre-specified criteria in the protocol were met, consistent with recent trials of other antibiotics that have been evaluated for diagnoses of cUTIs. The applicant explained that optional oral step-down therapy is commonly used in clinical trials of cUTIs to increase study participation by allowing patients to be discharged from the hospital following favorable response to IV therapy, rather than staying in the hospital for 10 days to receive the IV study drug. With regard to clinical practice, the applicant noted that the FDA label does not require patients to receive oral

therapy following administration of ZEMDRI™, and it would be the decision of the treating physician if a patient may be switched to an oral agent following IV infusion of ZEMDRI™ and the physician would determine the appropriate oral therapy, if applicable. The applicant indicated that levofloxacin did not influence the outcome of the study because it was used for a similarly short course in both the ZEMDRI™ and meropenem group, and the TOC visit outcomes continued to favor ZEMDRI™ in both patients who received the IV study drug only and those who received the IV study drug followed by oral therapy.

Response: We appreciate the applicant's clarification regarding levofloxacin's use in clinical practice, and agree that the use of levofloxacin did not negate the study results favoring ZEMDRI™ because it was used similarly in both groups and the TOC visit demonstrated improved outcomes for patients receiving only ZEMDRI™, as well as patients receiving ZEMDRI™ followed by oral antibiotic therapy.

We invited public comments on whether Plazomicin meets the substantial clinical improvement criterion for patients who have been diagnosed with BSI and cUTI, including with respect to whether Plazomicin constitutes a substantial clinical improvement for the treatment of patients who have been diagnosed with BSI who have limited or no alternative treatment options, and whether statistically better outcomes at test-of-cure visit, including higher eradication rates for ESBL-producing pathogens, and lower rate of subsequent clinical relapses constitute a substantial clinical improvement for patients who have been diagnosed with cUTI.

Comment: The applicant and other commenters believed that ZEMDRI™ represents a substantial clinical improvement for patients who have been diagnosed with a cUTI. The commenters stated that ZEMDRI™ offers a substantial clinical improvement over existing aminoglycosides, both in having a higher degree of susceptibility against CRE and enhanced potency, which potentially allows safer exposures of the drug. Another commenter described some of the complications and limitations of existing therapies, including colistin, polymyxin, tigecycline, ceftolozane/tazobactam, and ceftazidime/avibactam, and the limited effectiveness of antibiotics like amikacin, and noted that ZEMDRI™ provides an exciting option for transitions of care because it can be utilized in the outpatient setting and administered once-daily by IV infusion. Another commenter, generally, supported granting approval of new technology add-on payments for ZEMDRI™ and stated that this next-generation aminoglycoside is a substantial innovation and advancement in the treatment of serious bacterial infections due to MDR enterobacteriaceae that commonly occur in the hospital setting.

Response: We appreciate the applicant's and other commenters' input on whether ZEMDRI™ offers a substantial clinical improvement over current therapies for patients who have been diagnosed with a cUTI. We believe that ZEMDRI™ offers a substantial clinical improvement for patients who have limited or no alternative treatment options because it is a new antibiotic that offers a treatment option for a patient population unresponsive to currently available treatments. After consideration of the public comments we received, we have determined that ZEMDRI™ meets all of the criteria for approval of new technology add-on payments. Therefore, we are approving new

technology add-on payments for ZEMDRI™ for FY 2019. Cases involving ZEMDRI™ that are eligible for new technology add-on payments will be identified by ICD–10–PCS procedure codes XW033G4 and XW043G4.

In its application, the applicant estimated that the average Medicare beneficiary would require a dosage of 15 mg/kg administered as an IV infusion as a single dose. According to the applicant, the WAC for one dose is \$330, and patients will typically require 3 vials for the course of treatment with ZEMDRI™ per day for an average duration of 5.5 days. Therefore, the total cost of ZEMDRI™ per patient is \$5,445. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS–DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of ZEMDRI™ is \$2,722.50 for FY 2019. In accordance with the current ZEMDRI™ label, CMS expects that ZEMDRI™ will be prescribed for adult patients diagnosed with cUTIs, including pyelonephritis, who have limited or no alternative treatment options.

g. GIAPREZA™

The La Jolla Pharmaceutical Company submitted an application for new technology add-on payments for GIAPREZA™ for FY 2019. GIAPREZA™, a synthetic human angiotensin II, is administered through intravenous infusion to raise blood pressure in adult patients who have been diagnosed with septic or other distributive shock.

The applicant stated that shock is a life-threatening critical condition characterized by the inability to maintain blood flow to vital tissues due to dangerously low blood pressure (hypotension). Shock can result in organ failure and imminent death, such that mortality is measured in hours and days rather than months or years. Standard therapy for shock currently uses fluid and vasopressors to raise the mean arterial pressure (MAP). The two classes of standard of care (SOC) vasopressors are catecholamines and vasopressins. Patients do not always respond to existing standard of care therapies. Therefore, a diagnosis of shock can be a difficult and costly condition to treat. According to the applicant, 35 percent of patients who are diagnosed with shock fail to respond to standard of care treatment options using catecholamines and go on to second-line treatment, which is typically vasopressin. Eighty percent of patients on vasopressin fail to respond and have no other alternative treatment options. The applicant estimated that CMS covered charges to treat patients who are diagnosed with vasodilatory shock who fail to respond to standard of care therapy are approximately 2 to 3 times greater than the costs of other conditions, such as acute myocardial infarction, heart failure, and pneumonia. According to the applicant, one-third of patients in the intensive care unit are affected by vasodilatory shock, with 745,000 patients who have been diagnosed with shock being treated annually, of whom approximately 80 percent are septic.

With respect to the newness criterion, according to the applicant, the expanded access program (EAP), or FDA authorization for the “compassionate use” of an investigational drug outside of a clinical trial, was initiated August 8, 2017. GIAPREZA™ was granted Priority Review status and received FDA approval on

December 21, 2017, for the use in the treatment of adults who have been diagnosed with septic or other distributive shock as an intravenous infusion to increase blood pressure. The applicant submitted a request for approval for a unique ICD-10-PCS code for the administration of GIAPREZA™ beginning in FY 2019 and was granted approval for the following procedure codes effective October 1, 2018: XW033H4 (Introduction of synthetic human angiotensin II into peripheral vein, percutaneous approach, new technology, group 4) and XW043H4 (Introduction of synthetic human angiotensin II into central vein, percutaneous approach, new technology group 4).

As discussed above, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, according to the applicant, GIAPREZA™ is the first synthetic formulation of human angiotensin II, a naturally occurring peptide hormone in the human body. Angiotensin II is one of the major bioactive components of the renin-angiotensin-aldosterone system (RAAS), which serves as one of the body’s central regulators of blood pressure. Angiotensin II increases blood pressure through vasoconstriction, increased aldosterone release, and renal control of fluid and electrolyte balance. Current therapies for the treatment of patients who have been diagnosed with shock do not leverage the RAAS. The applicant asserted that GIAPREZA™ is a novel treatment with a unique mechanism of action relative to SOC treatments for patients who have been diagnosed with shock, which is adequate fluid

resuscitation and vasopressors. Specifically, the two classes of SOC vasopressors are catecholamines like Norepinephrine, epinephrine, dopamine, and phenylephrine IV solutions, and vasopressins like Vasopressin<sup>®</sup> and vasopressin-sodium chloride IV solutions. Catecholamines leverage the sympathetic nervous system and vasopressin leverages the arginine-vasopressin system to regulate blood pressure. However, the third system that works to regulate blood pressure, the RAAS, is not currently leveraged by any available therapies to raise mean arterial pressure in the treatment of patients who have been diagnosed with shock. The applicant maintained that GIAPREZA<sup>™</sup> is the first synthetic human angiotensin II approved by the FDA and the only FDA-approved vasopressor that leverages the RAAS and, therefore, GIAPREZA<sup>™</sup> utilizes a different mechanism of action than currently available treatment options.

The applicant explained that GIAPREZA<sup>™</sup> leverages the RAAS, which is a body system not used by existing vasopressors to raise blood pressure through inducing vasoconstriction. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20325), we stated we were concerned that GIAPREZA<sup>™</sup>'s general mechanism of action, increasing blood pressure by inducing vasoconstriction through binding to certain G-protein receptors to stimulate smooth muscle contraction, may be similar to that of norepinephrine, albeit leveraging a different body system. We invited public comments on whether GIAPREZA<sup>™</sup> uses a different mechanism of action to achieve a therapeutic outcome with respect to currently available treatment options, including comments or additional information regarding whether the mechanism of action used by GIAPREZA<sup>™</sup> is different from that of other treatment methods of stimulating vasoconstriction.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, we stated in the proposed rule that we believe that potential cases representing patients who may be eligible for treatment involving GIAPREZA™ would be assigned to the same MS-DRGs as cases representing patients who receive SOC treatment for a diagnosis of shock. As explained below in the discussion of the cost criterion, the applicant believed that potential cases representing patients who may be eligible for treatment involving GIAPREZA™ would be assigned to MS-DRGs that contain cases representing patients who have failed to respond to administration of fluid and vasopressor therapies.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, according to the applicant, once patients have failed treatment using catecholamines, treatment options for patients who have been diagnosed with severe septic or other distributive shock are limited. According to the applicant, agents that were previously available are each associated with their own adverse events (AEs). The applicant noted that primary options that have been investigated include vasopressin, corticosteroids, methylene blue, and blood purification techniques. Of these options, the applicant stated that only vasopressin has a recommendation as add on vasopressor therapy in current treatment guidelines, but the recommendations are listed as weak with moderate quality of evidence. According to the applicant, there is uncertainty regarding vasopressin's effect on mortality due to mixed clinical trial results, and higher doses of vasopressin have been associated with cardiac, digital, and splanchnic ischemia.

Therefore, the applicant asserted that there is a significant unmet medical need for treatments for patients who have been diagnosed with septic or distributive shock who remain hypotensive, despite adequate fluid and vasopressor therapy and for medications that can provide catecholamine-sparing effects.

The applicant also noted that there is currently no standard of care for addressing the clinical state of septic or other distributive shock experienced by patients who fail to respond to fluid and available vasopressor therapy. Additionally, according to the applicant, no clinical evidence or consensus for treatments is available.

Based on the applicant's statements as summarized above, we stated in the proposed rule that it appears that the applicant is asserting that GIAPREZA™ provides a new therapeutic treatment option for critically-ill patients who have been diagnosed with shock who have limited options and worsening prognosis. However, we further stated we were concerned that GIAPREZA™ may not offer a treatment option to a new patient population, specifically because the FDA approval for GIAPREZA™ does not reserve the use of GIAPREZA™ only as a last-line drug or adjunctive therapy for a subset of the patient population who have been diagnosed with shock who have failed to respond to standard of care treatment options. According to the FDA-approved labeling, GIAPREZA™ is a vasoconstrictor to increase blood pressure in adult patients who have been diagnosed with septic or other distributive shock. Patients who have been diagnosed with septic or other distributive shock are not a new patient population. Therefore, we stated that it appears that GIAPREZA™ is used to treat the same or similar

type of disease (a diagnosis of shock) and a similar patient population receiving SOC therapy for the treatment of shock.

In the proposed rule, we invited public comments on whether GIAPREZA™ meets the substantial similarity criteria and the newness criterion.

Comment: The applicant indicated that GIAPREZA™ is not substantially similar to existing treatment options because it is the sole member of a new class of vasopressor peptide, and the only one that acts to leverage the renin-angiotensin-aldosterone (RAAS) system. The applicant stated that GIAPREZA™'s mechanism of action is unique because GIAPREZA™ operates in a fundamentally different manner than norepinephrine, in addition to leveraging a different body system. The applicant noted, specifically, that GIAPREZA™ causes vasoconstriction of the smooth muscles and stimulates the release of aldosterone from the adrenal cortex to promote sodium retention by the kidneys, both of which lead to increased blood pressure. The applicant explained that, although catecholamines, vasopressin, and angiotensin II all engage G-coupled protein receptors for their function, they engage entirely different G-coupled receptors subtypes and engage different receptor targets. The applicant further described the biochemical pathways unique to angiotensin, and recommended that CMS consider the feedback mechanisms present in the classical RAAS<sup>123</sup>, which enable GIAPREZA™ to be more effective in the treatment of diagnosis of shock than standard-of-care vasopressors. The applicant provided literature and specific citations that suggested ACE activity is diminished in conditions associated with vasodilatory shock, which would result in a

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<sup>123</sup> Sparks MA, Crowley SD, Gurley SB, Mirotsoiu M, Coffman TM. Classical renin-angiotensin system in kidney physiology. *Comprehensive Physiology*. 2014;4(3):1201-1228. doi:10.1002/cphy.c130040.

state of relative angiotensin II deficiency, that is, excess angiotensin I, similar to a state induced by ACE inhibitor treatment in patients who have been diagnosed with essential hypertension.<sup>124,125</sup> According to the applicant, in vasodilatory shock syndromes, the addition of exogenous angiotensin II attenuates production of angiotensin I by suppressing release of renin at the juxtaglomerular apparatus, and potentially reduces angiotensin (1-7) levels, resulting in a more normalized angiotensin I to/ angiotensin II ratio and a reduced endogenous vasodilator drive. In contrast, the applicant asserted that norepinephrine is a catecholamine that functions as a peripheral vasoconstrictor by acting on alpha-adrenergic receptors and an inotropic stimulator of the heart and a dilator of coronary arteries, a result of its activity at the beta-adrenergic receptors. The applicant stated that, GIAPREZA™, however, has a non-adrenergic mechanism of action that contributes to its catecholamine-sparing effect. The applicant indicated that GIAPREZA™ can be administered in combination with norepinephrine because GIAPREZA™ affects vasoconstriction not by augmentation of norepinephrine, but by way of an entirely novel mechanism.

One commenter pointed out that vasoconstriction is a very general and fundamental physiologic mechanism by which blood pressure is regulated, such that it would occur with any regimen for treating patients who have been diagnosed with shock.

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<sup>124</sup> Luque M, Martin P, Martell N, Fernandez C, Brosnihan KB, Ferrario CM. Effects of captopril related to increased levels of prostacyclin and angiotensin-(1-7) in essential hypertension. *J Hypertens.* 1996;14:799–805.

<sup>125</sup> Balakumar P, Jagadeesh G. A century-old renin–angiotensin system still grows with endless possibilities: AT1 receptor signaling cascades in cardiovascular pathophysiology. *Cell Signal.* 2014;26(10):2147–60.

Other commenters stated that current standard-of-care treatment options only target two of the three major biological systems regulating MAP, which makes GIAPREZA™ the first and only FDA-approved synthetic human angiotensin II treatment option that activates the RAAS to increase MAP. The commenters believed that GIAPREZA™'s unique mechanism of action supports a multi-modal approach to the treatment of patients who have been diagnosed with shock that mimics the body's natural response to hypotension, and offers physicians a critical new tool for saving lives.

With respect to the second criterion, the applicant indicated that there are inherent difficulties in capturing specific patient types for a condition such as a diagnosis of shock, and explained that the current structure of the MS-DRG payment system does not yet have the refined elements necessary to identify those patients likely to respond to treatment involving GIAPREZA™. The applicant emphasized that the MS-DRGs for Septicemia or Severe Sepsis with or without Mechanical Ventilation > 96 Hours are MS-DRGs that are noted frequently as being in the top 10 highest volume Medicare MS-DRGs reported overall each year. The applicant believed that medical DRGs that are driven by complications have an inherently more challenging time demonstrating uniqueness as a function of Medicare's MS-DRG GROUPER approach than the medical device population. However, the applicant stated that as the ICD-10-CM/PCS system continues to evolve and new MS-DRGs are added to capture new technologies, there will be additional opportunities to better highlight certain products' use, like GIAPREZA™, in key populations.

Regarding the third criterion, the applicant contended that although the FDA approval for GIAPREZA™ is not reserved exclusively for patients diagnosed with shock who have failed to respond to standard-of-care treatment options, GIAPREZA™ still treats a new patient population that is a significant subset of the larger patient population for which GIAPREZA™ has received FDA approval. Specifically, the applicant emphasized that, of approximately 1.12 million hypotensive patients, greater than 50 percent fail the standard-of-care treatment practice and, therefore, have no other available treatment options. The applicant believed that GIAPREZA™ provides a new treatment option for Medicare beneficiaries that can be started immediately and can benefit the patient within only approximately 5 minutes.

Other commenters similarly stated that GIAPREZA™ fills an unmet need for new treatment options for patients who have been diagnosed with shock, considering that more than 50 percent of patients who have been diagnosed with distributive shock fail to meet MAP goals using the standard-of-care treatment options. The commenters emphasized that mortality from shock remains high, especially in patients who have been diagnosed with refractory shock, primarily due to progressive hypotension and resulting organ failure and limited treatment options. The commenters believed that GIAPREZA™ offers a breakthrough treatment option that promises to save lives by providing an alternative treatment option for a subset of the shock patient population for whom there was previously no other treatment options available.

In addition to the public comments summarized above regarding mechanism of action, MS-DRG assignment of potential cases eligible for treatment involving use of

GIAPREZA™, and the treatment of the intended patient population, the applicant stated that prior to approval of GIAPREZA™, only two classes of vasopressors were available: catecholamines and vasopressin, both of which have narrow therapeutic windows and significant toxic effects when administered at higher doses. The applicant further stated that catecholamines are correlated to serious complications, such as increased digital and limb necrosis<sup>126</sup> and kidney injury<sup>127</sup>. The applicant explained that vasopressin was the only non-catecholamine vasopressor available to clinicians, but it fails to improve blood pressure in the majority of patients, therefore, making its impact quite limited.<sup>128</sup>

Additionally, the applicant indicated that vasopressin is also slow to take effect (peak effect at 15 minutes) and, therefore, is difficult to titrate, to achieve and maintain the desired MAP, which further complicates its use and leaves patients hypotensive for longer.<sup>129,130</sup> The applicant further explained that last-resort adjuvant non-vasopressor therapies such as corticosteroids, ascorbic acid, thiamine, and methylene blue are still used in desperation, but none have been shown to reliably improve blood pressure or survival. Therefore, the applicant suggested that CMS recognize that GIAPREZA™ answers an unmet need for a safe, effective, fast-acting, alternative therapy.<sup>131</sup> With regard to newness, a couple of commenters stated that GIAPREZA™ is the first new

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<sup>126</sup> Brown SM, Lanspa MJ, Jones JP, et al. Survival After Shock Requiring High-Dose Vasopressor Therapy. *Chest*. 2013;143(3):664-671. doi:10.1378/chest.12-1106.

<sup>127</sup> Gordon AC, Mason AJ, Thirunavukkarasu N, et al. Effect of Early Vasopressin vs Norepinephrine on Kidney Failure in Patients With Septic Shock. *Jama*. 2016;316(5):509. doi:10.1001/jama.2016.10485.

<sup>128</sup> Sacha GL, Lam SW, Duggal A, Torbic H, Reddy AJ, et al, Hypotension risk based on vasoactive agent discontinuation order in patients in the recovery phase of septic shock. *Pharmacotherapy*. 2018 Mar;38(3):319-326. doi: 10.1002/phar.2082. Epub 2018 Feb 8.

<sup>129</sup> Vasostrict [Package Insert]. Chestnut Ridge, NY. Par Pharmaceutical; 2016.

<sup>130</sup> Malay MB, Ashton JL, Dahl K, Savage EB, Burchell SA, Ashton RC Jr, et al. Heterogeneity of the vasoconstrictor effect of vasopressin in septic shock. *Crit Care Med*. 2004;32(6):1327-31.

<sup>131</sup> Andreis DT, Singer M. Catecholamines for inflammatory shock: a Jekyll-and-Hyde conundrum. *Intensive Care Med*. 2016;42(9):1387-97.

vasopressor approved by the FDA in over 40 years. To the contrary, another commenter stated that it, generally, supported CMS' concerns about GIAPREZA™.

Response: After review of the information provided by the applicant and consideration of the public comments we received, we believe that GIAPREZA™ has a unique mechanism of action to achieve a therapeutic outcome because it leverages the RAAS system to increase blood pressure. Therefore, GIAPREZA™ is not substantially similar to existing treatment options and meets the newness criterion.

With regard to the cost criterion, the applicant conducted an analysis for a narrower indication, patients who have been diagnosed with refractory shock who have failed to respond to standard of care vasopressors, and an analysis for a broader indication of all patients who have been diagnosed with septic or other distributive shock. In the FY 2019 IPPS/LTCH PPS proposed rule (82 FR 20325), we stated we believed that only this broader analysis, which reflects the patient population for which the applicant's technology is approved by the FDA, is relevant to demonstrate that the technology meets the cost criterion and, therefore, we only summarized this broader analysis in the proposed rule (and below). In order to identify the range of MS-DRGs that potential cases representing potential patients who may be eligible for treatment using GIAPREZA™ may map to, the applicant used two separate analyses to identify the MS-DRGs for patients who have been diagnosed with shock or related diagnoses. The applicant also performed three sensitivity analyses on the MS-DRGs for each of the two selections: 100 percent of the MS-DRGs, 80 percent of the MS-DRGs, and 25 percent of the MS-DRGs. Therefore, a total of six scenarios were included in the cost analysis.

The first analysis (Scenario 1) selected the MS-DRGs most representative of the potential patient cases where treatment involving GIAPREZA™ would have the greatest clinical impact and outcomes of improvement over present treatment options. The applicant searched for 28 different ICD-9-CM codes under this scenario. The second analysis (Scenario 2) used the 80 most relevant ICD-9-CM diagnosis codes based on the inclusion criteria of the GIAPREZA™ Phase III clinical trial, ATHOS-3, and an additional 8 ICD-9-CM diagnosis codes for clinical presentation associated with vasodilatory or distributive shock patients failing fluid and standard of care therapy to capture any additional potential cases that may be applicable based on clinical presentations associated with this patient population.

Among only the top quartile of potential patient cases, the single MS-DRG representative of most potential patient cases was MS-DRG 871 (Septicemia or Severe Sepsis without Mechanical Ventilation > 96 Hours with MCC) for both ICD-9-CM diagnosis code selection scenarios, and in both selections, it accounted for a potential patient case percentage surpassing 25 percent. Because GIAPREZA™ is not reserved exclusively as a last-line drug based on the FDA indication, the applicant removed 50 percent of drug charges for prior technologies or other charges associated with prior technologies from the unstandardized charges before standardization in order to account for other drugs that may be replaced by the use of GIAPREZA™. At the time of development of the proposed rule, the applicant had not yet supplied CMS with pricing for GIAPREZA™ and did not include charges for the new technology when conducting this analysis. For all analyses' scenarios, the applicant standardized charges using the

FY 2015 impact file and then inflated the charges to FY 2019 using an inflation factor of 15.4181 percent (or 1.154181) by multiplying the inflation factor of 1.098446 in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57286) by the inflation factor of 1.05074 in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38524). The final inflated average case-weighted standardized charge per case was calculated for each scenario and compared with the average case-weighted threshold amount for each group of MS-DRGs based on the thresholds in Table 10.

Results of the analyses for each of the two code selection scenarios, each with three sensitivity analyses for a total of six analyses, are summarized in the tables below:

<b>Cost Analysis Based on ICD-9-CM Diagnosis Code Scenario 1</b>					
<b>ICD-9-CM Diagnosis Code Selection (28 Codes)</b>	<b>Number of MS-DRGs Assessed</b>	<b>Number of Medicare Cases</b>	<b>Case-Weighted New Technology Add-On Payment Threshold</b>	<b>Final Average Inflated Standardized Charge Per Case</b>	<b>Amount Exceeded Threshold</b>
100 Percent	439	120,966	\$77,427	\$111,522	\$34,095
80 Percent	10	96,102	\$77,641	\$100,167	\$22,526
25 Percent	1	66,980	\$53,499	\$71,951	\$18,452
<b>Cost Analysis Based on ICD-9-CM Diagnosis Code Scenario 2</b>					
<b>ICD-9-CM Diagnosis Code Selection (88 Codes)</b>	<b>Number of MS-DRGs Assessed</b>	<b>Number of Medicare Cases</b>	<b>Case-Weighted New Technology Add-On Payment Threshold</b>	<b>Final Average Inflated Standardized Charge Per Case</b>	<b>Amount Exceeded Threshold</b>
100 Percent	466	164,892	\$78,675	\$112,174	\$33,499
80 Percent	52	131,690	\$79,732	\$108,396	\$28,664
25 Percent	1	67,016	\$53,499	\$71,688	\$18,189

The applicant maintained that, based on the Table 10 thresholds, the inflated average case-weighted standardized charge per case in the analyses exceeded the average case-weighted threshold amount. The applicant noted that the inflated average case-weighted standardized charge per case exceeds the average case-weighted threshold amount by at least \$18,189, without the average per patient cost of the technology. As such, the applicant anticipated that the inclusion of the cost of GIAPREZA™, at any price point, would further increase charges above the average case-weighted threshold amount. Therefore, the applicant stated that the technology met the cost criterion. We noted in the proposed rule that we were unsure whether the selection in both scenarios fully captures the broader indication for which the FDA approved the use of GIAPREZA™. We invited

public comments on whether GIAPREZA™ meets the cost criterion, including with respect to the concern we had raised.

Comment: The applicant provided an updated cost analysis to broaden the patient cases according to the expanded FDA-approved indication. Specifically, the applicant stated that it removed the original exclusion criteria, which previously limited the patient cases used in the cost analysis to vasopressor-unresponsive patient cases, subjected all three ICD-9-CM code selections to a broader procedure code inclusion list, and additionally adjusted codes based on the clinical profile of diagnoses of distributive/septic shock.

The applicant noted, as noted in the proposed rule, that the inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount before including the average per patient cost of the technology. The applicant also added charges for the cost of the technology to its updated analysis. The applicant indicated that the WAC of GIAPREZA™ (which is supplied as a 2.5mg/1mL vial) is \$1,500 per vial. The applicant stated that, according to the FDA-approved labeling, the recommended dosage of GIAPREZA™ is 20 nanograms (ng)/kg/min administered as an IV infusion, titrated as frequently as every 5 minutes by increments of up to 15 ng/kg/min, as needed. The applicant stated that, because each vial contains 2.5 mg of GIAPREZA™, a patient weighing 70 kg infused for 48 hours at a constant dose of 20ng/kg/min would use 1.6 vials of GIAPREZA™. The applicant explained that, as vials will be used in whole integers, each episode-of-care would require 2 vials and

consequently would cost \$3,000 per patient, per episode-of-care, at the current WAC of \$1,500.

To estimate the anticipated average charge submitted by hospitals for use of GIAPREZA™, the applicant stated that it used a conservative CCR of 0.5, which equated to the lower hospital markups for similar drugs. The applicant subtracted 50 percent of the costs of prior technology charges, which resulted in the final inflated average standardized charge per case, which exceeded the Table 10 average case-weighted threshold amounts by an average of \$40,011, after the outlined changes were made. The applicant submitted the following table summarizing the updated cost threshold analysis:

**Summary of Case-Weighted Cost-Threshold Analysis Using FY2015 MedPAR Data  
(50 Percent of Pharmacy Charges) Post Issuance of the FY 2019 IPPS/LTCH PPS  
Proposed Rule**

<b>Cost Analysis Based on ICD-9-CM Diagnosis Code Scenario 1</b>					
<b>ICD-9-CM Diagnosis Code Selection (41 Codes)</b>	<b>Number of MS-DRGs Assessed</b>	<b>Number of Medicare Cases</b>	<b>Case- Weighted New Technology Add-On Payment Threshold</b>	<b>Final Inflated Average Case- Weighted Standardized Charge Per Case</b>	<b>Amount Exceeded Threshold</b>
100 Percent	711	816,386	\$93,312	\$134,127	\$40,815
80 Percent	55	652,298	\$97,759	\$134,733	\$36,974
25 Percent	1	145,043	\$53,499	\$82,947	\$29,448
<b>Cost Analysis Based on ICD-9-CM Diagnosis Code Scenario 2</b>					
<b>ICD-9-CM Diagnosis Code Selection (28 Codes)</b>	<b>Number of MS-DRGs Assessed</b>	<b>Number of Medicare Cases</b>	<b>Case- Weighted New Technology Add-On Payment Threshold</b>	<b>Inflated Average Case- Weighted Standardized Charge Per Case</b>	<b>Amount Exceeded Threshold</b>
100 Percent	499	318,168	\$93,324	\$148,143	\$54,819
80 Percent	8	251,694	\$96,337	\$139,486	\$43,149
25 Percent	1	145,345	\$53,499	\$82,900	\$29,401
<b>Cost Analysis Based on ICD-9-CM Diagnosis Code Scenario 3</b>					
<b>ICD-9-CM Diagnosis Code Selection (99 Codes)</b>	<b>Number of MS-DRGs Assessed</b>	<b>Number of Medicare Cases</b>	<b>Case- Weighted New Technology Add-On Payment Threshold</b>	<b>Inflated Average Case- Weighted Standardized Charge Per Case</b>	<b>Amount Exceeded Threshold</b>
100 Percent	685	487,091	\$97,294	\$147,388	\$50,094
80 Percent	45	388,622	\$103,664	\$149,700	\$46,036
25 Percent	1	145,472	\$53,499	\$82,866	\$29,367

Response: After consideration of the public comments we received, we agree that

GIAPREZA™ meets the cost criterion.

With respect to the substantial clinical improvement criterion, the applicant summarized that it believes that GIAPREZA™ represents a substantial clinical improvement because it: (1) addresses an unmet medical need for patients who have been diagnosed with septic or distributive shock that, despite standard of care vasopressors, are unable to maintain adequate mean arterial pressure; (2) is the only agent shown in randomized clinical trial to rapidly and sustainably achieve or maintain target blood pressure in patients who do not respond adequately to fluid and vasopressor therapy; (3) although not powered for mortality, the ATHOS-3 trial demonstrated a strong trend to reduce the risk of death in adults from septic or distributive shock who remain hypotensive despite fluid therapy and vasopressor therapy, a severe, life-threatening condition, for which there are no other therapies; (4) provides a catecholamine-sparing effect; and (5) is generally safe and well-tolerated, with no significant differences in the percentages of patients with any grade adverse events or serious adverse events when compared to placebo.

Expanding on the statements above, we stated in the proposed rule that the applicant believes that the use of GIAPREZA™ offers clinicians a significant new tool to manage and treat severe hypotension in all adult patients who have been diagnosed with septic or other distributive shock who are unresponsive to existing vasopressor therapies. The applicant also stated that the use of GIAPREZA™ provides a new therapeutic option for critically-ill adult patients who have been diagnosed with septic or other distributive shock who have limited options and worsening prognoses.

The applicant maintained that GIAPREZA™ was shown to be an effective treatment option for critically-ill patients who have been diagnosed with refractory shock. The applicant reported that a randomized, double-blind placebo controlled trial called ATHOS-3<sup>132</sup> examined the ability of GIAPREZA™ to increase mean arterial pressure (MAP), with the primary endpoint being achievement of a MAP of greater than or equal to 75 mmHg (the research-backed guideline set by the Surviving Sepsis Campaign) or a 10 mmHg increase in baseline MAP. Significantly more patients in the treatment arm met the primary endpoint (69.9 percent versus 23.4 percent,  $P < 0.001$ ). The applicant asserted that this MAP improvement constitutes a significant substantial clinical improvement because patients treated with GIAPREZA™ were three times more likely to achieve acceptable blood pressure than patients receiving the placebo. The MAP significantly and rapidly increased in patients treated with GIAPREZA™ and was sustained over 48 hours consistent across subgroups and the treatment effect of GIAPREZA™ was confirmed using multivariate analysis. The group treated with GIAPREZA™ also experienced a greater mean increase in MAP; the MAP increased by a mean of 12.5 mmHg for the GIAPREZA™ group compared to a mean of 2.9 mmHg for the placebo group.

Second, the applicant maintained that GIAPREZA™ demonstrated potential improvement in organ function by lowering the cardiovascular sequential organ failure assessment (SOFA) scores of patients at 48 hours (-1.75 GIAPREZA™ group

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<sup>132</sup> Khanna, A., English, S.W., Wang, X.S., et al., “Angiotensin II for the treatment of vasodilatory shock,” [supplementary appendix] [published online ahead of print May 21, 2017], *N Engl J Med.*, 2017, doi: 10.1056/NEJMoa1704154.

versus -1.28 placebo group). However, we stated in the proposed rule we were concerned that lower cardiovascular SOFA scores may not demonstrate substantial clinical improvement because there was no difference in the improvement of other components of the SOFA score or the overall SOFA score.

Third, the applicant asserted that GIAPREZA™ represents a substantial clinical improvement because the use of GIAPREZA™ reduced the need to increase overall doses of catecholamine vasopressors. The applicant stated that patients receiving higher doses of catecholamine vasopressors suffer from cardiac toxicity, organ dysfunction, and other metabolic complications that are associated with higher mortality. According to the applicant, by decreasing the overall dosage of catecholamine vasopressors, GIAPREZA™ potentially reduces the adverse effects of vasopressors. The mean change in catecholamine vasopressors in patients receiving GIAPREZA™ versus patients receiving the placebo at 3 hours was -0.03 versus 0.03 ( $P < 0.001$ ), showing that GIAPREZA™ allowed for catecholamines to be titrated down, while patients not receiving GIAPREZA™ required additional catecholamine doses. The vasopressor mean doses were consistently lower in the GIAPREZA™ group, and at 48 hours, vasopressors had been discontinued in 28.5 percent of patients in the placebo group versus 40.5 percent of the GIAPREZA™ group. We noted in the proposed rule that, while GIAPREZA™ may potentially reduce certain adverse effects associated with SOC treatments, the FDA-approved labeling cautions that the use of GIAPREZA™ can cause dangerous blood clots with serious consequences (clots in arteries and veins, including deep venous

thrombosis); according to the FDA-approved label, prophylactic treatment for blood clots should be used.

In the proposed rule, we noted that the applicant stated that while the study was not powered to detect mortality effects, there was a nonsignificant trend toward longer survival in the GIAPREZA™ group. Overall mortality rates at 7 days and 8 days in the modified intent to treat (MITT) population were 22 percent less in the GIAPREZA™ group than in the placebo group. At 28 days, the mortality rate in the placebo group was 54 percent versus 46 percent in the GIAPREZA™ group. However, the p-values for the decrease in mortality with GIAPREZA™ at 7 days, 8 days, and 28 days did not demonstrate statistical significance.

The applicant concluded that GIAPREZA™ is the first commercial product to increase blood pressure in adults who have been diagnosed with septic or other distributive shock that leverages the renin-angiotensin-aldosterone system. The applicant stated that the results of the ATHOS-3 study provide support for a well-tolerated new therapeutic agent that demonstrates significant improvements in mean arterial pressure. Additionally, the applicant noted that hypotension in adults who have been diagnosed with septic or other distributive shock is a prevalent life-threatening condition where therapeutic options are limited and a high unmet medical need exists. The applicant stated that the use of GIAPREZA™ will represent a safe and effective new therapy that not only leverages a system that current therapies are not utilizing, but also offers a viable alternative where one does not exist.

We stated in the proposed rule that we understood that, in this heterogeneous and difficult to treat patient population, studies assessing mortality as a primary endpoint are difficult, and as such, surrogate endpoints (that is, achieving baseline MAP) have been explored to assess the efficacy of treatments. While the outcomes presented by the applicant, such as achieving target MAP, lower SOFA scores, and reduced catecholamine usage, could be surrogates for clinical outcomes in these patients, we stated that there is not a strong pool of evidence connecting these single data points directly with morbidity and mortality. Therefore, in the proposed rule, we stated that we were unsure whether achieving target MAP, lower SOFA scores, and reduced catecholamine usage represents a substantial clinical improvement or instead short-term, temporary improvements without a change in overall patient prognosis.

In response to this concern about MAP constituting a meaningful measure for substantial clinical improvement, the applicant supplied additional information from the current Surviving Sepsis guidelines, which recommend an initial target MAP of 65 mmHg. The applicant explained that as MAP falls below a critical threshold, inadequate tissue perfusion occurs, potentially resulting in multiple organ dysfunction and death. Therefore, early and adequate hemodynamic support and treatment of hypotension is critical to restore adequate organ perfusion and prevent worsening organ dysfunction and failure. In diagnoses of septic or distributive shock, the goal of treatment is to increase and maintain a threshold MAP in order to improve tissue perfusion. According to the applicant, tissue perfusion becomes linearly dependent on arterial pressure below a threshold MAP. In patients who have been diagnosed with septic shock requiring

vasopressors, the current Surviving Sepsis guidelines are based on available evidence that demonstrates that adequate MAP is important to clinical outcomes and that prolonged decreases in MAP below 65 mmHg is associated with poor outcome. According to information supplied by the applicant, even short durations like less than 5 minutes of low MAP have been associated with severe outcomes, such as myocardial infarction, stroke, and acute kidney injury. The applicant stated that a retrospective study<sup>133</sup> found that MAP was independently related to ICU and hospital mortality in patients with severe sepsis or septic shock.

Finally, we stated in the proposed rule that we were concerned that the study results may demonstrate substantial clinical improvement only for patients who are unresponsive to the administration of fluids and vasopressors because patients were only included in the ATHOS-3 study if they failed fluids and vasopressors, rather than for the broader patient population of adult patients who have been diagnosed with septic or other distributive shock for which GIAPREZA™ was approved by the FDA for use as an available treatment option. We stated in the proposed rule that the applicant continues to maintain that the use of GIAPREZA™ has significant efficacy in improving blood pressure for patients who have been diagnosed with distributive shock, while decreasing adrenergic vasopressor usage, thereby, providing another avenue for therapy in this difficult to treat patient population. However, we stated we were still concerned that the results from the clinical trial may be too narrow to accurately represent the entire patient

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<sup>133</sup> Walsh, M., Devereaux, P.J., Garg, A.X., et al., "Relationship between Intraoperative Mean Arterial Pressure and Clinical Outcomes after Noncardiac Surgery Toward an Empirical Definition of Hypotension," *Anesthesiology*, 2013, vol. 119(3), pp. 507-515.

population that has been diagnosed with septic or other distributive shock and, therefore, we were concerned that the clinical trial's results may not adequately demonstrate that GIAPREZA™ is a substantial clinical improvement over existing therapies for all the patients for whom the treatment option is indicated. We invited public comments on whether GIAPREZA™ meets the substantial clinical improvement criterion.

Comment: The applicant submitted comments addressing the concerns raised by CMS in the proposed rule regarding whether GIAPREZA™ meets the substantial clinical improvement criterion. With respect to the concern regarding the SOFA scores, the applicant stated that the data results, which it believes demonstrate that GIAPREZA™ delivers substantial clinical improvement, are not based solely upon the observed improvements in the SOFA score. Rather, the applicant explained that SOFA is used to identify patients at a greater risk of poor outcomes. The applicant stated that the mean cardiovascular SOFA score at hour 48 showed that there was significant improvement in the GIAPREZA™ group (-1.75) versus the placebo group (-1.28) (p=0.01), reflecting a higher incidence of vasopressor discontinuation prior to hour 48 and a reduced catecholamine dose in the GIAPREZA™ group.

The applicant also reiterated that clinical data showing GIAPREZA™'s proven benefit of reducing the need for background vasopressors constitutes a substantial clinical improvement, considering the significant toxic effects of catecholamines and vasopressin administered at higher doses, including cardiac and digital ischemia; tachyarrhythmias with norepinephrine; cardiac, digital, and splanchnic ischemia; and ischemic skin lesions

with vasopressin.<sup>134,135,136,137,138,139</sup> The applicant further stated that norepinephrine (a catecholamine) is also associated with immunosuppression, which may predispose the patient to a higher risk of secondary infections.<sup>140</sup> Other commenters similarly stated that use of GIAPREZA™ reduces the need for administration of these high-dose vasopressors and helps patients achieve MAP, with a significant reduction in adverse effects, unlike with the use of other vasopressors which fail to raise a patient's MAP and are associated with increases in mortality when administered at high doses; including cardiac toxicity, necrosis of the skin and distal extremities, and metabolic dysfunction. Regarding the risk of thrombosis, the applicant stated that most of the thromboembolic adverse events were of lower severity and assigned to Grade I or Grade II. The applicant further pointed out that patients who are diagnosed with vasodilatory shock are, generally, at a high risk for thrombosis, and that the FDA labeling and the immediate availability of blood-thinning agents fully address this potential safety concern.

In response to our concern that the mortality benefit was not statistically significant, the applicant stated that the p-values for the decrease in mortality rates with

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<sup>134</sup> Dünser MW, Meier J. Vasopressor hormones in shock—noradrenaline, vasopressin or angiotensin II: which one will make the race? *J Thorac Dis.* 2017;9(7):1843–7.

<sup>135</sup> Dünser MW, Hasibeder WR. Sympathetic overstimulation during critical illness: adverse effects of adrenergic stress. *J Intensive Care Med.* 2009;24(5):293–316.

<sup>136</sup> Russell JA, Rush B, Boyd J. Pathophysiology of septic shock. *Crit Care Clin.* 2018;34(1):43–61.

<sup>137</sup> Asfar P, Meziani F, Hamel JF, Grelon F, Megarbane B, Anguel N, et al. High versus low blood-pressure target in patients with septic shock. *N Engl J Med.* 2014;370(17):1583–93.

<sup>138</sup> Schmittinger CA, Torgersen C, Luckner G, Schroder DC, Lorenz I, and Dunser MW. Adverse cardiac events during catecholamine vasopressor therapy: a prospective observational study. *Intensive Care Med.* 2012;38(6):950–8.

<sup>139</sup> Russell JA, Walley KR, Singer J, Gordon AC, Hébert PC, Cooper DJ, et al. VASST Investigators. Vasopressin versus norepinephrine infusion in patients with septic shock. *N Engl J Med.* 2008;358(9):877–87.

<sup>140</sup> Stolk RF, van der Poll T, Angus DC, van der Hoeven JG, Pickkers P, Kox M. Potentially inadvertent immunomodulation: Norepinephrine use in sepsis. *Am J Respir Crit Care Med.* 2016;194(5):550–8.

use of GIAPREZA™ may not demonstrate statistical significance because the clinical trial was not powered to definitively prove a decrease in mortality rate. The applicant also contended that the substantial clinical improvement criterion described in the September 7, 2001 final rule (66 FR 46902) identifies only a “reduced mortality rate” as one of a multitude of different standards and does not restrict p-values cited to a certain range to support a new technology add-on payment application determination. Therefore, the applicant believed that the p-values support the validity of the new technology add-on payment application for GIAPREZA™; they do not detract from it. Similarly, other commenters stated that GIAPREZA™ is the only vasopressor to show a strong trend towards a survival benefit.

The applicant also disagreed with CMS regarding our statement in the proposed rule that there is not a strong pool of evidence directly connecting target MAP, lower SOFA scores, and reduced catecholamine usage with morbidity and mortality. The applicant submitted additional evidence from the Surviving Sepsis Campaign and international and European consensus guidelines to demonstrate that maintaining an adequate MAP is a clinically meaningful benefit affecting morbidity and mortality. The applicant reiterated that when MAP drops below 60 mmHg, the human body loses autoregulatory control of blood supply to key organs<sup>141</sup>, and even short durations of hypotension (< 5 minutes) are associated with increased serious adverse outcomes, such

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<sup>141</sup> LeDoux D, Astiz ME, Carpati CM, Rackow EC. Effects of perfusion pressure on tissue perfusion in septic shock. *Crit Care Med.* 2000;28(8):2729–32.

as myocardial ischemia and acute kidney injury.<sup>142</sup> Furthermore, the applicant cited research demonstrating that a low MAP is associated with an increased 28-day mortality, and stated that an analysis of outcomes in patients who have been diagnosed with distributive shock demonstrated a clear relationship between duration and extent of hypotension and ICU mortality.<sup>143,144</sup>

The applicant also stated that clinical data show reduced catecholamine use, a benefit of treatment involving GIAPREZA™, is associated with less mortality and less morbidity. The applicant further stated that, according to an analysis conducted by the applicant of outcomes based on a 50 percent reduction of the administration of catecholamine doses at 24 hours, those patients with a 50 percent reduction of administration of catecholamines doses at 24 hours had a statistically significant improved survival benefit. Additionally, the applicant indicated that the catecholamine-sparing effect resulted in significantly fewer patients experiencing a serious adverse event or a fatal event.

Finally, in response to our concern that the results from the clinical trial may be too narrow to accurately represent the entire patient population that has been diagnosed with septic or other distributive shock and, therefore, may not adequately demonstrate that GIAPREZA™ is a substantial clinical improvement over existing therapies for all the

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<sup>142</sup> Walsh M, Devereaux PJ, Garg AX, Kurz A, Turan A, Rodseth RN, et al. Relationship between intraoperative mean arterial pressure and clinical outcomes after noncardiac surgery: toward an empirical definition of hypotension. *Anesthesiology*. 2013;119(3):507–15.

<sup>143</sup> Johnson AE, Pollard TJ, Shen L, et al. MIMIC-III, a freely accessible critical care database. *Sci data* 2016;3:160035.

<sup>144</sup> Nielsen ND, Zeng F, Gerbasi ME, Oster G, Grossman A, Shapiro NI. Blood pressure control and clinical outcomes in patients with distributive shock in an academic intensive care setting. 2018 ISICEM Annual Meeting, Brussels, Belgium (March 20-23, 2018); Abstract No. A516.

patients for whom the treatment option is indicated, the applicant posited that CMS' definition of substantial clinical improvement in the September 7, 2001 final rule (66 FR 46902) does not refer to the scope of FDA approval or the patient populations that were enrolled in the clinical trial. The applicant asserted that the multitude of benefits that GIAPREZA™ delivers directly pertaining to the substantial clinical improvement criterion cannot be assumed to be restricted solely to patients who have been diagnosed with refractory shock. The applicant specifically summarized the following improved outcomes:

- *Reduced mortality rate with use of the device:* A promising trend toward lower mortality was observed in the GIAPREZA™ arm, and more generally, MAP  $\geq$ 65 mmHg is associated with decreased mortality<sup>145</sup>.
- *Reduced rate of device-related complications:* GIAPREZA™ reduced the need for background vasopressors, the utilization of which is correlated to serious complications such as increased digital and limb necrosis,<sup>146</sup> and kidney injury.<sup>147</sup>
- *Decreased rate of subsequent diagnostic or therapeutic interventions:* In a sub-population analysis of patients suffering from acute kidney injury, it was found that

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<sup>145</sup> Nielsen ND, Zeng F, Gerbasi ME, Oster G, Grossman A, Shapiro NI. Blood pressure control and clinical outcomes in patients with distributive shock in an academic intensive care setting. 2018 ISICEM Annual Meeting, Brussels, Belgium (March 20–23, 2018); Abstract No. A516.

<sup>146</sup> Brown SM, Lanspa MJ, Jones JP, et al. Survival After Shock Requiring High-Dose Vasopressor Therapy. *Chest*. 2013;143(3):664-671. doi:10.1378/chest.12-1106.

<sup>147</sup> Gordon AC, Mason AJ, Thirunavukkarasu N, et al. Effect of Early Vasopressin vs Norepinephrine on Kidney Failure in Patients With Septic Shock. *Jama*. 2016;316(5):509. doi:10.1001/jama.2016.10485.

GIAPREZA™-treated patients had fewer ICU days, shorter dialysis days, reduced ventilation usage, and longer survival, compared to placebo.<sup>148 149</sup>

- *More rapid beneficial resolution of the disease process treatment:* Whereas SOC vasopressors are administered for extended periods (days), GIAPREZA™ has a much shorter time to effect of only five minutes.

- *Reduced recovery time:* Since low MAP is associated with high ICU and 28-day mortality and GIAPREZA™ achieved target MAP of 75 mmHg by hour 3 in significantly more patients than the standard-of-care, while reducing the need for other vasopressors, GIAPREZA™ may result in a shorter ICU length of stay and a faster recovery.

Other commenters supported the clinical results and evidence of GIAPREZA™,s meeting the substantial clinical improvement criterion, and explained that not only did the ATHOS-3 study provide compelling support for a well-tolerated new therapeutic agent that demonstrated significant improvements in MAP, it also demonstrated a strong trend toward improved survival benefit, a catecholamine-sparing effect, an increase in ICU free days, and a reduction in patients requiring renal replacement therapy (RRT). To the contrary, another commenter stated that it, generally, supported CMS' concerns.

Response: We appreciate the additional information and analysis provided by the applicant and the commenters' input in response to our concerns regarding substantial clinical improvement. After reviewing the information submitted by the applicant

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<sup>148</sup> Khanna A, et al. Angiotensin II for the Treatment of Vasodilatory Shock Suppl: S14. *NEJM*. 2017. DOI: 10.1056/NEJMoal704154

<sup>149</sup> Tumlin JA, Murugan R, Deane AM, et al. Outcomes in Patients with Vasodilatory Shock and Renal Replacement Therapy Treated with Intravenous Angiotensin II. *Critical Care Medicine*. 2018;46(6):949-957. doi:10.1097/ccm.3092.

addressing our concerns raised in the proposed rule, we agree that GIAPREZA™ more rapidly allows for beneficial resolution of the disease process treatment with its shorter time to effect of only five minutes, and that GIAPREZA™ has a reduced rate of device-related complications by reducing the need for background vasopressors, the utilization of which is correlated to serious complications. Specifically, we agree with the commenters and the applicant that a reduction in high-dose SOC catecholamines and vasopressin, which can be toxic and have numerous adverse effects, constitutes a substantial clinical improvement. We also agree with the applicant that the FDA-approved label, which cautions that prophylactic treatment for blood clots should be used, addresses the potential safety concern of thrombosis for patients treated with GIAPREZA™. Based on the data provided by the applicant and consideration of the public comments we received, we agree with the applicant and the commenters that GIAPREZA™ represents a substantial clinical improvement over existing technologies because it quickly and effectively raises MAP while allowing for a reduction in other vasopressors.

After consideration of the public comments we received, we have determined that GIAPREZA™ meets all of the criteria for approval for new technology add-on payments. Therefore, we are approving new technology add-on payments for GIAPREZA™ for FY 2019. Cases involving the use of GIAPREZA™ that are eligible for new technology add-on payments will be identified by ICD–10–PCS procedure codes XW033H4 and XW043H4.

In its application, the applicant estimated that the average Medicare beneficiary would require a dosage of 20ng/kg/min administered as an IV infusion over 48 hours, which would require 2 vials. The applicant explained that the WAC for one vial is \$1,500, with each episode-of-care costing \$3,000 per patient. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of GIAPREZA™ is \$1,500 for FY 2019.

h. Cerebral Protection System (Sentinel® Cerebral Protection System)

Claret Medical, Inc. submitted an application for new technology add-on payments for the Cerebral Protection System (Sentinel® Cerebral Protection System) for FY 2019. According to the applicant, the Sentinel Cerebral Protection System is indicated for the use as an embolic protection (EP) device to capture and remove thrombus and debris while performing transcatheter aortic valve replacement (TAVR) procedures. The device is percutaneously delivered via the right radial artery and is removed upon completion of the TAVR procedure. The De Novo request for the Sentinel® Cerebral Protection System was granted by FDA on June 1, 2017 (DEN160043).

Aortic stenosis (AS) is a narrowing of the aortic valve opening. AS restricts blood flow from the left ventricle to the aorta and may also affect the pressure in the left atrium. The most common presenting symptoms of AS include dyspnea on exertion or decreased exercise tolerance, exertional dizziness (presyncope) or syncope and exertional

angina. Symptoms experienced by patients who have been diagnosed with AS and normal left ventricular systolic function rarely occur until stenosis is severe (defined as valve area is less than 1.0 cm<sup>2</sup>, the jet velocity is over 4.0 m/sec, and/or the mean transvalvular gradient is greater than or equal to 40 mmHg).<sup>150</sup> AS is a common valvular disorder in elderly patients. The prevalence of AS increases with age, and some degree of valvular calcification is present in 75 percent of patients who are 85 to 86 years old<sup>151</sup>. TAVR procedures are the standard of care treatment for patients who have been diagnosed with severe AS. Patients undergoing TAVR procedures are often older, frail, and may be affected by multiple comorbidities, implying a significant risk for thromboembolic cerebrovascular events.<sup>152</sup> Embolic ischemic strokes can occur in patients undergoing surgical and interventional cardiovascular procedures, such as stenting (carotid, coronary, peripheral), catheter ablation for atrial fibrillation, endovascular stent grafting, left atrial appendage closure (LAAO), patent foramen ovale (PFO) closure, balloon aortic valvuloplasty, surgical valve replacement (SAVR), and TAVR. Clinically overt stroke, or silent ischemic cerebral infarctions, associated with the TAVR procedure, may result from a variety of causes, including mechanical manipulation of instruments or other interventional devices used during the procedure. These mechanical manipulations are caused by, but not limited to, the placement of a

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<sup>150</sup> Otto, C., Gaasch, W., "Clinical manifestations and diagnosis of aortic stenosis in adults," In S. Yeon (Ed.), 2016, Available at: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-aortic-stenosis-in-adults>.

<sup>151</sup> Lindroos, M., et al., "Prevalence of aortic valve abnormalities in the elderly: An echocardiographic study of a random population sample," *J Am Coll Cardio*, 1993, vol. 21(5), pp. 1220-1225.

<sup>152</sup> Giustino, G., et. al., "Neurological Outcomes With Embolic Protection Devices in Patients Undergoing Transcatheter Aortic Valve Replacement," *J Am Coll Cardio*, CARDIOVASCULAR INTERVENTIONS, 2016, vol. 9(20).

relatively large bore delivery catheter in the aortic arch, balloon valvuloplasty, valve positioning, valve re-positioning, valve expansion, and corrective catheter manipulation, as well as use of guidewires and guiding or diagnostic catheters required for proper positioning of the TAVR device. The magnitude and timing of embolic activity resulting from these manipulations was studied by Szeto, et al.<sup>153</sup> using a transcranial Doppler, and it was found that embolic material is liberated throughout the TAVR procedure with some of the emboli reaching the central nervous system leading to cerebral ischemic infarctions. Some of the cerebral ischemic infarctions lead to neurologic injury and clinically apparent stroke. Szeto, et al. also noted that the rate of silent ischemic cerebral infarctions following TAVR procedures is estimated to be between 68 and 91 percent.<sup>154,155</sup>

The TAVR procedure is a minimally invasive procedure that does not involve open heart surgery. During a TAVR procedure the prosthetic aortic valve is placed within the diseased native valve. The prosthetic valve then becomes the functioning aortic valve. As previously outlined, stroke is one of the risks associated with TAVR procedures. According to the applicant, the risk of stroke is highest in the early post-procedure period and, as previously outlined, is likely due to mechanical factors

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<sup>153</sup> Szeto, W.Y., et al., "Cerebral Embolic Exposure During Transfemoral and Transapical Transcatheter Aortic Valve Replacement," *J Card Surg*, 2011, vol. 26, pp. 348-354.

<sup>154</sup> Gupta, A., Giambone, A.E., Gialdini, G., et al., "Silent brain infarction and risk of future stroke: a systematic review and meta-analysis," *Stroke*, 2016, vol. 47, pp. 719-25.

<sup>155</sup> Mokin, M., Zivadinov, R., Dwyer, M.G., Lazar, R.M., Hopkins, L.N., Siddiqui, A.H., "Transcatheter aortic valve replacement: perioperative stroke and beyond," *Expert Rev Neurother*, 2017, vol. 17, pp. 327-34.

occurring during the TAVR procedure.<sup>156</sup> Emboli can be generated as wire-guided devices are manipulated within atherosclerotic vessels, or when calcified valve leaflets are traversed and then crushed during valvuloplasty and subsequent valve deployment.<sup>157</sup> Stroke rates in patients evaluated 30 days after TAVR procedures range from 1.0 percent to 9.6 percent<sup>158</sup>, and have been associated with increased mortality. Additionally, new “silent infarcts,” assessed via diffusion-weighted magnetic resonance imaging (DW-MRI), have been found in a majority of patients after TAVR procedures.<sup>159</sup>

As stated earlier, the De Novo request for the Sentinel<sup>®</sup> Cerebral Protection System was granted by FDA on June 1, 2017. The FDA concluded that this device should be classified into Class II (moderate risk). Effective October 1, 2016, ICD-10-PCS Section “X” code X2A5312 (Cerebral embolic filtration, dual filter in innominate artery and left common carotid artery, percutaneous approach) was approved to identify cases involving TAVR procedures using the Sentinel<sup>®</sup> Cerebral Protection System.

As discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments.

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<sup>156</sup> Nombela-Franco, L., et al., “Timing, predictive factors, and prognostic value of cerebrovascular events in a large cohort of patients undergoing transcatheter aortic valve implantation,” *Circulation*, 2012, vol. 126(25), pp. 3041-53.

<sup>157</sup> Freeman, M., et al., “Cerebral events and protection during transcatheter aortic valve replacement,” *Catheterization and Cardiovascular Interventions*, 2014, vol. 84(6), pp. 885-896.

<sup>158</sup> Haussig, S., Linke, A., “Transcatheter aortic valve replacement indications should be expanded to lower-risk and younger patients,” *Circulation*, 2014, vol. 130(25), pp. 2321-31.

<sup>159</sup> Kahlert, P., et al., “Silent and apparent cerebral ischemia after percutaneous transfemoral aortic valve implantation: a diffusion-weighted magnetic resonance imaging study,” *Circulation*, 2010, vol. 121(7), pp. 870-8.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, according to the applicant, the Sentinel<sup>®</sup> Cerebral Protection System device is inserted at the beginning of the TAVR procedure, via a small tube inserted through a puncture in the right wrist. Next, using a minimally invasive catheter, two small filters are placed in the brachiocephalic and left common carotid arteries. The filters collect debris, preventing it from becoming emboli, which can travel to the brain. These emboli, if left uncaptured, can cause cerebral ischemic lesions, often referred to as silent ischemic cerebral infarctions, potentially leading to cognitive decline or clinically overt stroke. At the completion of the TAVR procedure, the filters, along with the collected debris, are removed. The applicant stated that there are no other similar products for commercial sale available in the United States for cerebral protection during TAVR procedures. Two neuroprotection devices, the Triguard<sup>™</sup> Cerebral Protection Device (Keystone Heart, Herzliya Pituach, Israel) and the Embrella Embolic Deflector<sup>™</sup> System (Edwards Lifesciences, Irvine, CA) are used in Europe. These devices work by deflecting embolic debris distally, rather than capturing and removing debris with filters.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, as stated earlier, the Sentinel<sup>®</sup> Cerebral Protection System is an EP device used to capture and remove thrombus and debris while performing TAVR procedures. Therefore, potential cases representing patients who may be eligible for treatment involving this device would map to the same MS-DRGs as cases involving TAVR procedures.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, according to the applicant, this technology will be used to treat patients who have been diagnosed with severe aortic valve stenosis who are eligible for a TAVR procedure. The applicant asserted that there are currently no approved alternative treatment options for cerebral protection during TAVR procedures, and the Sentinel<sup>®</sup> Cerebral Protection System is the first and only embolic protection device for use during TAVR procedures and, therefore, meets the newness criterion. The applicant also asserted that the device meets the newness criterion, as evidenced by the FDA's granting of the De Novo request and there was no predicate device.

Based on the above, we stated in the proposed rule that it appears that the Sentinel<sup>®</sup> Cerebral Protection System is not substantially similar to other existing technologies. We invited public comments on whether the Sentinel<sup>®</sup> Cerebral Protection System is substantially similar to any existing technology and whether it meets the newness criterion.

Comment: Several commenters agreed with CMS' assessment that the Sentinel<sup>®</sup> Cerebral Protection System is not substantially similar to other existing technologies.

Response: After consideration of the public comments we received, we believe the Sentinel<sup>®</sup> Cerebral Protection System is not substantially similar to other existing technologies because it is the only neuro protective device available in the U.S. that has been granted a De Novo request by the FDA. Therefore, we believe that the Sentinel<sup>®</sup> Cerebral Protection System meets the newness criterion.

The applicant conducted the following analysis to demonstrate that the technology meets the cost criterion. The applicant searched the FY 2016 MedPAR file for cases with the following ICD-10-CM procedure codes to identify cases involving TAVR procedures, which are potential cases representing patients who may be eligible for treatment involving use of the Sentinel<sup>®</sup> Cerebral Protection System: 02RF37Z (Replacement of aortic valve with autologous tissue substitute, percutaneous approach); 02RF38Z (Replacement of aortic valve with zooplastic tissue, percutaneous approach); 02RF3JZ (Replacement of aortic valve with synthetic substitute, percutaneous approach); 02RF3KZ (Replacement of aortic valve with nonautologous tissue substitute, percutaneous approach); 02RF37H (Replacement of aortic valve with autologous tissue substitute, transapical, percutaneous approach ); 02RF38H (Replacement of aortic valve with zooplastic tissue, transapical, percutaneous approach); 02RF3JH (Replacement of aortic valve with synthetic substitute, transapical, percutaneous approach); and 02RF3KH (Replacement of aortic valve with nonautologous tissue substitute, transapical, percutaneous approach). This process resulted in 26,012 potential cases. The applicant limited its search to MS-DRG 266 (Endovascular Cardiac Valve Replacement with MCC) and MS-DRG 267 (Endovascular Cardiac Valve Replacement without MCC) because these two MS-DRGs accounted for 97.4 percent of the total cases identified.

Using the 26,012 identified cases, the applicant determined that the average unstandardized case-weighted charge per case was \$211,261. No charges were removed for the prior technology because the device is used to capture and remove thrombus and debris while performing TAVR procedures. The applicant then standardized the charges,

but did not inflate the charges. The applicant then added charges for the new technology to the average case-weighted standardized charges per case by taking the cost of the device and dividing the amount by the CCR of 0.332 for implantable devices from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38103). The applicant calculated a final inflated average case-weighted standardized charge per case of \$187,707 and a Table 10 average case-weighted threshold amount of \$170,503. Because the final inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount, the applicant maintained that the technology met the cost criterion. We invited public comments on whether the Sentinel<sup>®</sup> Cerebral Protection System meets the cost criterion.

Comment: The applicant reiterated that the Sentinel<sup>®</sup> Cerebral Protection System meets the cost criterion.

Response: We appreciate the applicant's input. After consideration of the public comment we received and reviewing the cost data and data analysis submitted by the applicant, we agree that the Sentinel<sup>®</sup> Cerebral Protection System meets the cost criterion.

With regard to the substantial clinical improvement criterion, the applicant asserted that the Sentinel<sup>®</sup> Cerebral Protection System represents a substantial clinical improvement over existing technologies because it is the first and only cerebral embolic protection device commercially available in the United States for use during TAVR procedures. The applicant stated that the data below shows that the Sentinel<sup>®</sup> Cerebral Protection System effectively captures brain bound embolic debris and significantly

improves clinical outcomes (that is, stroke) beyond the current standard of care, that is, TAVR procedures with no embolic protection.

The applicant provided the results of four key studies: (1) the SENTINEL<sup>®</sup> study<sup>160</sup> conducted by Claret Medical, Inc.; (2) the CLEAN-TAVI trial<sup>161</sup>; (3) the Ulm real-world registry<sup>162</sup>; and (4) the MISTRAL-C study<sup>163</sup>. The applicant reported that the SENTINEL<sup>®</sup> study was a prospective, single blind, multi-center, randomized study using the Sentinel<sup>®</sup> Cerebral Protection System which enrolled patients who had been diagnosed with severe symptomatic calcified native aortic valve stenosis indicated for a TAVR procedure. A total of 363 patients at 19 centers in the United States and Germany were randomized across 3 arms (Safety, Test, and Control) in a 1:1:1 fashion. According to the applicant, evaluations performed for patients in each arm were as follows:

- Safety Arm patients who underwent a TAVR procedure involving the Sentinel<sup>®</sup> Cerebral Protection System -- Patients enrolled in this arm of the study received safety follow-up at discharge, at 30 days and 90 days post-procedure; and neurological evaluation at baseline, discharge, 30 days and 90 days (only in the case of a stroke experienced less than or equal to 30 days) post-procedure. The Safety Arm patients did not undergo MRI or neurocognitive assessments.

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<sup>160</sup> Kapadia, S., Kodali, S., Makkar, R., et al., "Protection against cerebral embolism during transcatheter aortic valve replacement," *JACC*, 2017, vol. 69(4), pp. 367-377.

<sup>161</sup> Haussig, S., Mangner, N., Dwyer, M.G., et al., "Effect of a Cerebral Protection Device on Brain Lesions Following Transcatheter Aortic Valve Implantation in Patients With Severe Aortic Stenosis: The CLEAN-TAVI Randomized Clinical Trial," *JAMA*, 2016, vol. 316, pp. 592-601.

<sup>162</sup> Seeger, J., et al., "Cerebral Embolic Protection During Transfemoral Aortic Valve Replacement Significantly Reduces Death and Stroke Compared With Unprotected Procedures," *JACC Cardiovasc Interv*, 2017.

<sup>163</sup> Mieghem, Van, et al., "Filter-based cerebral embolic protection with transcatheter aortic valve implantation: the randomized MISTRAL-C trial," *Eurointervention*, 2016, vol. 12(4), pp. 499-507.

- Test Arm patients who underwent a TAVR procedure involving the Sentinel<sup>®</sup> Cerebral Protection System -- Patients enrolled in this arm of the study underwent safety follow-up at discharge, at 30 days and 90 days post-procedure; MRI assessment for efficacy at baseline, 2 to 7 days and 30 days post-procedure; neurological evaluation at baseline, discharge, 30 days and 90 days (only in the case of a stroke experienced less than or equal to 30 days) post-procedure; neurocognitive evaluation at baseline, 2 to 7 days (optional), 30 days and 90 days post-procedure; Quality of Life assessment at baseline, 30 days and 90 days; and histopathological evaluation of debris captured in the Sentinel<sup>®</sup> Cerebral Protection System's device filters.

- Control Arm patients who underwent a TAVR procedure only -- Patients enrolled in this arm of the study underwent safety follow-up at discharge, at 30 days and 90 days post-procedure; MRI assessment for efficacy at baseline, 2 to 7 days and 30 days post-procedure; neurological evaluation at baseline, discharge, 30 days and 90 days (only in the case of a stroke experienced less than or equal to 30 days) post-procedure; neurocognitive evaluation at baseline, 2 to 7 days (optional), 30 days and 90 days post-procedure; and Quality of Life assessment at baseline, 30 days and 90 days.

The primary safety endpoint was occurrence of major adverse cardiac and cerebrovascular events (MACCE) at 30 days compared with a historical performance goal. MACCE was defined as follows: all causes of death; all strokes (disabling and nondisabling, Valve Academic Research Consortium-2 (VARC-2)); and acute kidney injury (stage 3, VARC-2). The point estimate for the historical performance goal for the primary safety endpoint at 30 days post-TAVR procedure was derived from a review of

published reports of 30-day TAVR procedure outcomes. The VARC-2 established an independent collaboration between academic research organizations and specialty societies (cardiology and cardiac surgery) in the United States and Europe to create consistent endpoint definitions and consensus recommendations for implementation in TAVR procedure clinical research.<sup>164</sup>

The applicant reported that results of the SENTINEL<sup>®</sup> study demonstrated the following:

- The rate of MACCE was numerically lower than the control arm, 7.3 percent versus 9.9 percent, but was not statistically significant from that of the control group ( $p = 0.41$ ).
- New lesion volume was  $178.0 \text{ mm}^3$  in control patients and  $102.8 \text{ mm}^3$  in the Sentinel<sup>®</sup> Cerebral Protection System device arm ( $p = 0.33$ ). A post-hoc multi-variable analysis identified preexisting lesion volume and valve type as predictors of new lesion volume.
- Strokes experienced at 30 days were 9.1 percent in control patients and 5.6 percent in patients treated with the Sentinel<sup>®</sup> Cerebral Protection System devices ( $p = 0.25$ ). Neurocognitive function was similar in control patients and patients treated with the Sentinel<sup>®</sup> Cerebral Protection System devices, but there was a correlation between lesion volume and neurocognitive decline ( $p = 0.0022$ ).

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<sup>164</sup> Leon, M.B., Piazza, N., Nikolsky, E., et al., “Standardized endpoint definitions for transcatheter aortic valve implantation clinical trials: a consensus report from the Valve Academic Research Consortium,” *European Heart Journal*, 2011, vol. 32(2), pp. 205-217, doi:10.1093/eurheartj/ehq406.

- Debris was found within filters in 99 percent of patients and included thrombus, calcification, valve tissue, artery wall, and foreign material.
- The applicant also noted that the post-hoc analysis of these data demonstrated that there was a 63 percent reduction in 72-hour stroke rate (compared to control),  $p = 0.05$ .

According to the applicant, the CLEAN-TAVI (Claret Embolic Protection and TAVI) trial, was a small, randomized, double-blind, controlled trial. The trial consisted of 100 patients assigned to either EP (n = 50) with the Claret Medical, Inc. device (the Sentinel<sup>®</sup> Cerebral Protection System) or to no EP (n = 50). Patients were all treated with femoral access and self-expandable (SE) devices. The study endpoint was the number of brain lesions at 2 days post-procedure versus baseline. Patients were evaluated with DW-MRI at 2 and 7 days post-TAVR procedure. The mean age of patients was 80 years old; 43 percent were male. The study results showed that patients treated with the Sentinel<sup>®</sup> Cerebral Protection System had a lower number of new lesions (4.00) than patients in the control group (10.0); ( $p < 0.001$ ).

According to the applicant, the single-center Ulm study, a large propensity matched trial, with 802 consecutive patients, occurred at the University of Ulm between 2014 and 2016. The first 522 patients (65.1 percent of patients) underwent a TAVR procedure without EPs, and the subsequent 280 patients (34.9 percent of patients) underwent a TAVR procedure with EP involving the Sentinel<sup>®</sup> Cerebral Protection System. For both arms of the study, a TAVR procedure was performed in identical settings except without cerebral EP, and neurological follow-up was performed within 7

days post-procedure. The primary endpoint was a composite of all-cause mortality or all-stroke according to the VARC-2 criteria within 7 days. The authors who documented the study noted the following:

- Patient baseline characteristics and aortic valve parameters were similar between groups, that both filters of the device were successfully positioned in 280 patients, all neurological follow-up was completed by the 7<sup>th</sup> post-procedure date, and that propensity score matching was performed to account for possible confounders.
- Results indicated a decreased rate of disabling and nondisabling stroke at 7 days post-procedure was seen in those patients who were treated with the Sentinel<sup>®</sup> Cerebral Protection System device versus control patients (1.6 percent versus 4.6 percent,  $p = 0.03$ ).
- At 48 hours, stroke rates were lower with patients treated with the Sentinel<sup>®</sup> Cerebral Protection System device versus control patients (1.1 percent versus 3.6 percent,  $p = 0.03$ ).
- In multi-variate analysis, TAVR procedures performed without the use of a EP device was found to be an independent predictor of stroke within 7 days ( $p = 0.04$ ).

The aim of the MISTRAL-C study was to determine if the Sentinel<sup>®</sup> Cerebral Protection System affects new brain lesions and neurocognitive performance after TAVR procedures. The study was designed as a multi-center, double-blind, randomized trial enrolling patients who were diagnosed with symptomatic severe aortic stenosis and 1:1 randomization to TAVI patients treated with or without the Sentinel<sup>®</sup> Cerebral Protection System. From January 2013 to August 2015, 65 patients were enrolled in the study.

Patients ranged in age from 77 years old to 86 years old, 15 (47 percent) were female and 17 (53 percent) were male patients randomized to the Sentinel<sup>®</sup> Cerebral Protection System group and 16 (49 percent) were female and 17 (51 percent) were male patients randomized to the control group. There were 3 mortalities between 5 days and 6 months post-procedure for the Sentinel<sup>®</sup> Cerebral Protection System group. There were no strokes reported for the Sentinel<sup>®</sup> Cerebral Protection System group. There were 7 mortalities between 5 days and 6 months post-procedure for the control group. There were 2 strokes reported for the control group. Patients underwent DW-MRI and neurological examination, including neurocognitive testing 1 day before and 5 to 7 days after TAVI. Follow-up DW-MRI and neurocognitive testing was completed in 57 percent of TAVI patients treated with the Sentinel<sup>®</sup> Cerebral Protection System and 80 percent for the group of TAVI patients treated without the Sentinel<sup>®</sup> Cerebral Protection System. New brain lesions were found in 78 percent of the patients with follow-up MRI. According to the applicant, patients treated with the Sentinel<sup>®</sup> Cerebral Protection System had numerically fewer new lesions and a smaller total lesion volume (95 mm<sup>3</sup> versus 197 mm<sup>3</sup>). Overall, 27 percent of the patients treated with the Sentinel<sup>®</sup> Cerebral Protection System and 13 percent of the patients treated in the control group had no new lesions. Ten or more new brain lesions were found only in the patients treated in the control group (20 percent in the control group versus 0 percent in the Sentinel<sup>®</sup> Cerebral Protection System group,  $p = 0.03$ ). Neurocognitive deterioration was present in 4 percent of the patients treated with the Sentinel<sup>®</sup> Cerebral Protection System versus 27 percent of the

patients treated without ( $p=0.017$ ). The filters captured debris in all of the patients treated with Sentinel<sup>®</sup> Cerebral Protection System device.

In the Ulm study, the primary outcome was a composite of all-cause mortality or stroke at 7 days, and occurred in 2.1 percent of the Sentinel<sup>®</sup> Cerebral Protection System group versus 6.8 percent of the control group ( $p = 0.01$ , number needed to treat (NNT) = 21). Use of the Sentinel<sup>®</sup> Cerebral Protection System device was associated with a 2.2 percent absolute risk reduction in mortality with NNT 45. Composite endpoint of major adverse cardiac and cerebrovascular events (MACCE) was found in 2.1 percent of those patients undergoing a TAVR procedure with the use of the Sentinel<sup>®</sup> Cerebral Protection System device versus 7.9 percent in the control group ( $p = 0.01$ ). Similar but statistically nonsignificant trends were found in the SENTINEL<sup>®</sup> study, with rate of MACCE of 7.3 percent in the Sentinel<sup>®</sup> Cerebral Protection System group versus 9.9 percent in the control group ( $p = 0.41$ ).

The applicant reported that the four studies discussed above that evaluated the Sentinel<sup>®</sup> Cerebral Protection System device have limitations because they are either small, nonrandomized and/or had significant loss to follow-up. In the proposed rule, we stated that a meta-analysis of EP device studies, the majority of which included use of the Sentinel<sup>®</sup> Cerebral Protection System device, found that use of cerebral EP devices was associated with a nonsignificant reduction in stroke and death.<sup>165</sup> After further review, we realize we misquoted the statement made in the study. The meta-analysis from 2016

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<sup>165</sup> Giustino, G., et al., "Neurological Outcomes With Embolic Protection Devices in Patients Undergoing Transcatheter Aortic Valve Replacement," *Journal of the American College of Cardiology: Cardiovascular Interventions*, 2016, vol. 9(20), pp. 2124-2133.

actually concluded the following: “Although the differences in overt stroke were not significant, use of intraoperative EP was associated with a numeric stroke reduction, which may become significant in larger RCTs powered for hard endpoints.” We note that we provide an updated discussion of this meta-analysis in our response to comments below.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20338), we stated we were concerned that the use of cerebral protection devices may not be associated with a significant reduction in stroke and death. We noted that the SENTINEL<sup>®</sup> study, although a randomized study, did not meet its primary endpoint, as illustrated by nonstatistically significant reduction in new lesion volume on MRI or nondisabling strokes within 30 days (5.6 percent stroke rate in the Sentinel<sup>®</sup> Cerebral Protection System device group versus a 9.1 percent stroke rate in the control group at 30 days;  $p = 0.25$ ). We also noted that only with a post-hoc analysis of the SENTINEL<sup>®</sup> study data were promising trends noted, where the device use was associated with a 63 percent reduction in stroke events at 72 hours ( $p = 0.05$ ). Additionally, although there was a statistically significant difference between the patients treated with and without cerebral embolic protection in the composite of all-cause mortality or stroke at 7 days, the Ulm study was a nonrandomized study and propensity matching was performed during analyses. We stated we are concerned that studies involving the Sentinel<sup>®</sup> Cerebral Protection System may be inconclusive regarding whether the device represents a substantial clinical improvement for patients undergoing TAVR procedures. We also stated we are concerned that the SENTINEL<sup>®</sup> studies did not show a substantial decrease in neurological complications

for patients undergoing TAVR procedures. We invited public comments on whether the Sentinel<sup>®</sup> Cerebral Protection System meets the substantial clinical improvement criterion.

Comment: The applicant submitted comments in response to the concerns we raised in the proposed rule. Specifically, in the proposed rule, we noted the following:

- The SENTINEL<sup>®</sup> study, although a randomized study, did not meet its primary endpoint as illustrated by non-statistically significant reduction in new lesion volume on MRI or non-disabling strokes within 30 days (5.6 percent stroke rate in the Sentinel<sup>®</sup> Cerebral Protection System device group versus a 9.1 percent stroke rate in the control group at 30 days;  $p = 0.25$ ).

- Only with a post-hoc analysis of the SENTINEL<sup>®</sup> study data were promising trends noted where the device use was associated with a 63 percent reduction in stroke events at 72 hours ( $p = 0.05$ ).

With regard to the above, the applicant responded and explained the following with respect to the SENTINEL<sup>®</sup> trial:

- The SENTINEL<sup>®</sup> trial's success criteria were designed with two primary efficacy endpoints that were a surrogate imaging endpoint combination of: (1) observed reduction of 30 percent in new lesion volume on MRI; and (2) statistical reduction in new lesion volume on MRI. The applicant indicated that the trial was successful in demonstrating a 42 percent reduction in new lesion volume, but as CMS pointed out, it did not, on its own, reach statistical significance, which the applicant stated was because of, in part, the surrogate nature of the endpoint as well as the higher than expected

variability. The applicant noted that the variability resulted from the following sources: (1) variability in the MRI data, in part due to the variability in the allowed time window of 2 to 7 days, logistics of scheduling follow-up MRIs within this time window for elderly patients, and the transient nature of the DW-MRI signal over time which made the signal decay rate very noisy; (2) variability due to multiplicity (total of four types) of TAVR valve types (including balloon expandable and self-expanding) introduced mid-course into the trial (the trial was powered for only two types of TAVR valves originally), which behaved differently and required different procedural parameters in terms of pre-dilatation or post-dilatation and repositioning; and (3) variability in the patient baseline lesion volumes burden or white matter disease, which was unaccounted for because this was new science generated as a result of this trial<sup>166</sup> that has now been published, and a related manuscript<sup>167</sup> submitted and in review.

- In retrospect, the SENTINEL<sup>®</sup> trial was underpowered for the surrogate efficacy endpoint. However, according to the applicant, a meta-analysis of all three randomized trials of Claret dual-filter technology in TAVR using MRI endpoints by Latib, et al. (2017), which had an increased number of patients available for analysis, did show statistically significant reduction in new lesion volume.

- The primary safety endpoint for the SENTINEL<sup>®</sup> trial was occurrence of all Major Adverse Cardiac and Cerebrovascular Events (MACCE) at 30 days compared to a

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<sup>166</sup> Lazar, R., et al., “Neurocognition and Cerebral Lesion Burden in High-Risk Patients Before Undergoing Transcatheter Aortic Valve Replacement: Insights From the SENTINEL Trial,” *J Cardiovasc Interv*, February 26, 2018, vol. 11(4), pp. 384-392.

<sup>167</sup> Dwyer, M., et al., “Pre-procedural white matter lesion burden predicts MRI outcomes in transcatheter aortic valve replacement (TAVR): The SENTINEL Trial.

historical performance goal, and the Sentinel<sup>®</sup> Cerebral Protection System met this endpoint for noninferiority ( $p < 0.001$ ) and superiority ( $p = 0.0026$ )

- The SENTINEL<sup>®</sup> trial was not designed to be powered to show a statistically significant reduction in procedural stroke between trial arms at 30-days; therefore, it did not reach statistical significance. However, according to the applicant, investigators were encouraged by the trend to lower rates of stroke in the Sentinel<sup>®</sup> arms (5.6 percent) as compared to Control (9.1 percent) at 30-days. Additionally, more than 60 percent of ischemic neurological events in TAVR occur during the acute peri procedural phase as a result of thromboembolic debris released from manipulation of TAVR and accessory devices in a heavily atherosclerotic vascular and valvular structures<sup>168</sup>. As a result, the SENTINEL<sup>®</sup> investigators and FDA Advisory Panel at large were, according to the applicant, keen to temporally analyze the stroke data in two phases (acute and subacute). The applicant stated that this post-hoc analysis demonstrated that the acute phase is the critical period where cerebral protection offers the most protection against any incidence of stroke by demonstrating a significant treatment effect of 63 percent at  $< 72$  hours. This window was less confounded by events that may occur later in the subacute phase after a TAVR procedure as a result of new onset AF or suboptimal anticoagulation/antiplatelet regimens.

Response: We appreciate the applicant's input and have considered this information in our determination below.

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<sup>168</sup> Kapadia, S., et al., *Circ Cardiovasc Interv*, September 2016, vol. 9(9), pp. 1-10.

Comment: With regard to CMS' concern in the proposed rule that the use of cerebral protection devices may not be associated with a significant reduction in stroke and death (as noted previously, we have corrected our statement from the proposed rule on the findings of the meta-analysis on which this statement was based), the applicant stated that the meta-analysis of 180 randomized patients from 3 small randomized trials from 2016 did not include the results from the SENTINEL<sup>®</sup> randomized trial, which were not available at the time, but the authors of this study (Giustino, G., et al.<sup>169</sup>) subsequently published in 2017 an updated systematic review and meta-analysis of 5 randomized trials totaling 625 patients (in which the SENTINEL<sup>®</sup> trial contributed 363 patients to the 625 patients in the 2017 meta-analysis). The 2017 Giustino, G., et al. meta-analysis evaluated EP during TAVR, including SENTINEL<sup>®</sup>, and showed that at 30 days EP was associated with a lower risk of death or stroke on relative (6.4 percent versus 10.8 percent; RR: 0.57; 95 percent CI: 0.33 to 0.98; p = 0.04; I2 = 0 percent) and absolute (ARD: -4.4 percent; 95 percent CI: -9.0 percent to -0.1 percent; NNT = 22) terms (that is, for every 22 patients assigned to an EP device, 1 death or stroke event may be averted). According to the applicant, these findings suggest that EP may be a clinically relevant adjunctive strategy in patients undergoing TAVR procedures. The applicant noted that in the updated analysis, the authors of Giustino, G., et al. stated that, in conclusion, the totality of the data suggests that use of EP during TAVR appears to be associated with a significant reduction in death or stroke.

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<sup>169</sup> Giustino, G., Sabato, S., Mehran, R., Faggioni, M., and Dangas, G., "Cerebral Embolic Protection During TAVR, A Clinical Event Meta-Analysis," *JACC*, 2017, vol. 69, pp. 465-66.

The applicant stated that an independent group recently published a similar meta-analysis of the same 5 randomized trials in the *Journal of Thoracic Disease*<sup>170</sup> and reached the same conclusion as Giustino, G., et al. The applicant indicated that a third meta-analysis has been accepted that is in press, which includes 5 randomized and prospective observational studies, totaling 1,160 TAVR patients, in which cerebral embolic protection was used in 661<sup>171</sup>. According to the applicant, the authors found that the risk of strokes within the first week of TAVR was significantly lower in the CPD group [0.56(95 percent CI 0.33-0.96)]; p=0.034. The authors concluded that TAVR with CPD is associated with decreased strokes within 1 week of follow-up and not associated with an increase in peri-procedural adverse events. The applicant stated that it is important to note that the effectiveness of cerebral protection devices is during the procedure and best measured within a week or less of the procedure. The applicant further noted that events occurring after 1 week, up to and beyond 30 days are often associated with new-onset atrial fibrillation associated with the valve implant, inadequate anticoagulation regimen, and unrelated background risk.

Response: In the comment above, the applicant focused on the 2017 meta-analysis from Giustino, G., et al.<sup>172</sup> and stated, as indicated in the summary above, that the authors concluded that the totality of the data suggests that use of EP during TAVR appears to be associated with a significant reduction in death or stroke.

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<sup>170</sup> Wang N and Phan K, "Cerebral protection devices in transcatheter aortic valve replacement: a clinical meta-analysis of randomized controlled trials", *J Thorac Dis*, 2018;10(3):1927-1935.

<sup>171</sup> Mohananeey D, et al. "Safety and Efficacy of Cerebral Protection Devices in Transcatheter Aortic Valve Replacement: A Clinical End-points Meta-analysis." *Cardiovasc Revasc Med*, 2018 Feb 16.

<sup>172</sup> Giustino, G., Sabato, S., Mehran, R., Faggioni, M., and Dangas, G., "Cerebral Embolic Protection During TAVR, A Clinical Event Meta-Analysis," *JACC*, 2017, vol. 69, pp. 465-66.

However, in April 2018, based on updated data, the authors for the 2017 Giustino, G., et al. publication updated their conclusion of the 2017 meta-analysis and stated the following: “In conclusion, the totality of the data suggests that use of EP during TAVR appears to be associated with a nonsignificant trend towards reduction in death or stroke.” Therefore, we continue to be concerned that the use of cerebral protection devices may not be associated with a significant reduction in stroke and death beyond 7 days (which is the focus of the meta-analysis). However, we note, as discussed below, the applicant has responded with additional information regarding the reduction in death or stroke within 7 days.

Comment: In response to CMS’ concerns as indicated in the proposed rule that the studies involving the Sentinel<sup>®</sup> Cerebral Protection System may be inconclusive regarding whether the device represented a substantial clinical improvement for patients undergoing TAVR procedures, the applicant referenced the academic study from the University of Ulm in Germany, which was independently funded and conducted, and published by Seeger, J., et al.<sup>173</sup> The applicant stated that this study is an example of performance in routine clinical use, as investigators used the Sentinel<sup>®</sup> Cerebral Protection System in 280 consecutive TAVR patients and compared results in a propensity-score analysis to recent unprotected patients from the same institution, with the same operators, and the same independent neurologist who adjudicated all the neurological events. According to the applicant, this approach gives information about

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<sup>173</sup> Seeger, J., et al., “Cerebral Embolic Protection During Transfemoral Aortic Valve Replacement Significantly Reduces Death and Stroke Compared With Unprotected Procedures,” *JACC Cardiovasc Interv*, 2017.

performance in a broad set of patients seen in clinical practice, unrestricted by inclusion and exclusion criteria of randomized trials. The applicant further explained that the academic study from the University of Ulm used propensity-score analysis based on an optimal matching attempt by adjusting/matching up to 14 key confounders after performing a comprehensive multivariable analysis by stepwise forward regression to evaluate independent predictors of clinical events. The applicant explained that propensity-score analyses are well accepted in the interventional cardiology and medical device community at large. The applicant further stated that propensity-score analyses are an alternative when randomized trials are not possible, practical, or ethical. For example, according to the applicant, in the case of cerebral embolic protection, investigators have struggled with ethical and moral imperatives of randomizing when many patients do not want to enter a randomized trial when they know that the device is already commercially available.

The applicant added that it believed that the 1 to 7 day time period is the most appropriate for evaluation of cerebral protection efficacy because it is difficult to accurately diagnose neurological impairment immediately post-operatively when the patient is recovering from the effects of anesthesia and some sequelae of embolic events can take time to evolve and be diagnosed, and conversely time points later than a week or so are confounded by strokes unrelated to embolic events during the index procedure, such as New Onset of Atrial Fibrillation (NOAF), suboptimal concomitant anti-platelet/anticoagulation medication, and other comorbid history of the patients.

The applicant noted that, in the past few months, a number of TAVR centers have begun to share their data from routine practice using the Sentinel<sup>®</sup> Cerebral Protection System in TAVR procedures, which are in line with the clinical event reductions seen in the aforementioned trials. The applicant provided information from the following TAVR centers:

- Erasmus Medical Center (Rotterdam, The Netherlands) demonstrated comprehensive and systematic analysis of 747 TAVR patients treated with or without the use of the Sentinel<sup>®</sup> EP with independent neurological adjudication of the events. The applicant noted that, as presented by Nicolas van Mieghem, MD at the Joint Interventional Meeting (JIM) 2018 and Cardiovascular Research Technologies (CRT) 2018 conferences in February and March, there was an 80 percent relative risk reduction from 5 percent (23/453) to 1 percent (3/294) for all-stroke + TIA at 3 days with use of Sentinel<sup>®</sup> (p<0.01).

- Data from Cedars-Sinai Medical Center in Los Angeles, CA from a comprehensive and systematic analysis of 419 TAVR patients treated with or without the use of the Sentinel<sup>®</sup> EP results show : 78 percent relative risk reduction from 6.3 percent (8/128) to 1.4 percent (4/291) for all-stroke at 7 days with use of Sentinel<sup>®</sup> (HR 0.22 (95 percent CI : 0.06 to 0.74, p=0.01).

- Data from Pinnacle Health (Harrisburg, PA) as presented by Hemal Gada, MD at the CMS New Technology Town Hall meeting, February 2018, demonstrated a reduction from 10 percent (7/69) 7-day stroke rate without the use of the Sentinel<sup>®</sup> to 0

percent (0/53) with the use of the Sentinel<sup>®</sup>, as of the time at the Town Hall presentation in February.

The applicant concluded that the clinical evidence is robust, consistent, reliable, and repeatable and that the totality of the data shows that Sentinel<sup>®</sup> Cerebral Protection System represents a substantial clinical improvement for patients undergoing TAVR procedures.

Response: We appreciate the applicant's response to our concerns and its additional input. We agree with the applicant that the 1 to 7 day time period is the most appropriate for evaluation of cerebral protection efficacy. Specifically, as the commenter noted, it is difficult to accurately diagnose neurological impairment immediately post-operatively when the patient is recovering from the effects of anesthesia and some sequelae of embolic events can take time to evolve and be diagnosed. Conversely, time points later than 7 days are confounded by strokes unrelated to embolic events during the index procedure, such as NOAF, suboptimal concomitant anti-platelet/anticoagulation medication, and other comorbid history of the patients. We believe that the use of propensity matching in the Ulm study supports the statistical difference of all-cause mortality or stroke at 7 days. Specifically, as stated above, in the Ulm study, the primary outcome was a composite of all-cause mortality or stroke at 7 days, and occurred in 2.1 percent of the Sentinel<sup>®</sup> Cerebral Protection System group versus 6.8 percent of the control group ( $p = 0.01$ , number needed to treat (NNT) = 21). Use of the Sentinel<sup>®</sup> Cerebral Protection System device was associated with a 2.2 percent absolute risk reduction in mortality with NNT = 45. Composite endpoint of major adverse cardiac and

cerebrovascular events (MACCE) was found in 2.1 percent of those patients undergoing a TAVR procedure with the use of the Sentinel<sup>®</sup> Cerebral Protection System device versus 7.9 percent in the control group (p = 0.01). Therefore, we believe the data provided by the applicant showing reduced mortality and stroke within 7 days of a TAVR procedure as compared to patients undergoing a TAVR procedure without a cerebral protection device demonstrate that the Sentinel<sup>®</sup> Cerebral Protection System represents a substantial clinical improvement.

After consideration of the public comments we received, we have determined that the Sentinel<sup>®</sup> Cerebral Protection System meets all of the criteria for approval for new technology add-on payments. Therefore, we are approving new technology add-on payments for the Sentinel<sup>®</sup> Cerebral Protection System for FY 2019. Cases involving the use of the Sentinel<sup>®</sup> Cerebral Protection System that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure code X2A5312. In its application, the applicant estimated that the cost of the Sentinel<sup>®</sup> Cerebral Protection System is \$2,400. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of the Sentinel<sup>®</sup> Cerebral Protection System is \$1,400 for FY 2019.

i. The AQUABEAM System (Aquablation)

PROCEPT BioRobotics Corporation submitted an application for new technology add-on payments for the AQUABEAM System (Aquablation) for FY 2019. According to

the applicant, the AQUABEAM System is indicated for the use in the treatment of patients experiencing lower urinary tract symptoms caused by a diagnosis of benign prostatic hyperplasia (BPH). The AQUABEAM System consists of three main components: a console with two high-pressure pumps, a conformal surgical planning unit with trans-rectal ultrasound imaging, and a single-use robotic hand-piece.

The applicant reported that The AQUABEAM System provides the operating surgeon a multi-dimensional view, using both ultrasound image guidance and endoscopic visualization, to clearly identify the prostatic adenoma and plan the surgical resection area. Based on the planning inputs from the surgeon, the system's robot delivers Aquablation, an autonomous waterjet ablation therapy that enables targeted, controlled, heat-free and immediate removal of prostate tissue used for the purpose of treating lower urinary tract symptoms caused by a diagnosis of BPH. The combination of surgical mapping and robotically-controlled resection of the prostate is designed to offer predictable and reproducible outcomes, independent of prostate size, prostate shape or surgeon experience.

In its application, the applicant indicated that benign prostatic hyperplasia (BPH) is one of the most commonly diagnosed conditions of the male genitourinary tract<sup>174</sup> and is defined as the "...enlargement of the prostate due to benign growth of glandular tissue..." in older men.<sup>175</sup> BPH is estimated to affect 30 percent of males that are older

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174 Bachmann, A., Tubaro, A., Barber, N., d'Ancona, F., Muir, G., Witzsch, U., Thomas, J., "180-W XPS GreenLight Laser Vaporisation Versus Transurethral Resection of the Prostate for the Treatment of Benign Prostatic Obstruction: 6-month safety and efficacy results of a european multicentre randomised trial - the GOLIATH study," *European Association of Urology*, 2014, vol. 65, pp. 931-942.

175 Gilling, P., Anderson, P., and Tan, A., "Aquablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: 1-Year results," *The Journal of Urology*, 2017, vol. 197, pp. 156-1572.

than 50 years old.<sup>176,177</sup> BPH may compress the urethral canal possibly obstructing the urethra, which may cause symptoms that effect the lower urinary tract, such as difficulty urinating (dysuria), hesitancy, and frequent urination.<sup>178,179,180</sup>

The initial treatment for a patient who has been diagnosed with BPH is watchful waiting and medications.<sup>181</sup> Symptom severity, as measured by one test, the International Prostate Symptom Score (IPSS), is the primary measure by which surgery necessity is decided.<sup>182</sup> Many techniques exist for the surgical treatment of patients who have been diagnosed with BPH, and these surgical treatments differ primarily by the method of resection: electrocautery in the case of Transurethral Resection of the Prostate (TURP), laser enucleation, plasma vaporization, photoselective vaporization, radiofrequency

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176 Roehrborn, C., Gange, S., Shore, N., Giddens, J., Bolton, D., Cowan, B., Rukstalist, D., "The Prostatic Urethral Lift for the Treatment of Lower Urinary Tract Symptoms Associated with Prostate Enlargement Due to Benign Prostatic Hyperplasia: The LIFT study," *The Journal of Urology*, 2013, vol. 190, pp. 2161-2167.

177 Sonksen, J., Barber, N., Speakman, M., Berges, R., Wetterauer, U., Greene, D., Gratzke, C., "Prospective, Randomized, Multinational Study of Prostatic Urethral Lift Versus Transurethral Resection of the Prostate: 12-month results from the BPH6 study," *European Association of Urology*, 2015, vol. 68, pp. 643-652.

178 Roehrborn, C., Gange, S., Shore, N., Giddens, J., Bolton, D., Cowan, B., Rukstalist, D., "The Prostatic Urethral Lift for the Treatment of Lower Urinary Tract Symptoms Associated with Prostate Enlargement Due to Benign Prostatic Hyperplasia: The LIFT study," *The Journal of Urology*, 2013, vol. 190, pp. 2161-2167.

179 Sonksen, J., Barber, N., Speakman, M., Berges, R., Wetterauer, U., Greene, D., Gratzke, C., "Prospective, Randomized, Multinational Study of Prostatic Urethral Lift Versus Transurethral Resection of the Prostate: 12-month results from the BPH6 study," *European Association of Urology*, 2015, vol. 68, pp. 643-652.

180 Roehrborn, C., Gilling, P., Cher, D., and Templin, B., "The WATER Study (Waterjet Ablation Therapy for Endoscopic Resection of prostate tissue)," Redwood City: PROCEPT BioRobotics Corporation, 2017.

181 Ibid.

182 Cunningham, G. R., Kadmon, D., 2017, "Clinical manifestations and diagnostic evaluation of benign prostatic hyperplasia," 2017. Available at: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnostic-evaluation-of-benign-prostatic->

ablation, microwave thermotherapy, and transurethral incision<sup>183</sup> are among the primary methods. TURP is the primary reference treatment for patients who have been diagnosed with BPH.<sup>184,185,186,187,188</sup>

According to the applicant, while the TURP procedure achieves alleviation of the symptoms that affect the lower urinary tract associated with a diagnosis of BPH, morbidity rates caused by adverse events are high following the procedure. The TURP procedure has a well-documented history of associated adverse effects, such as hematuria, clot retention, bladder wall injury, hyponatremia, bladder neck contracture, urinary incontinence, and retrograde ejaculation.<sup>189,190,191,192,193</sup> The likelihood of both

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hyperplasia?search=cunningham%20kadmon%202017%20benign%20prostatic&source=search\_result&selectedTitle=2~150&usage\_type=default&display\_rank=2.

183 Ibid.

184 Bachmann, A., Tubaro, A., Barber, N., d'Ancona, F., Muir, G., Witzsch, U., Thomas, J., "180-W XPS GreenLight Laser Vaporisation Versus Transurethral Resection of the Prostate for the Treatment of Benign Prostatic Obstruction: 6-month safety and efficacy results of a european multicentre randomised trial - the GOLIATH study," *European Association of Urology*, 2014, vol. 65, pp. 931-942.

185 Cunningham, G. R., Kadmon, D., "Clinical manifestations and diagnostic evaluation of benign prostatic hyperplasia," 2017. Available at: [https://www.uptodate.com/contents/clinical-manifestations-and-diagnostic-evaluation-of-benign-prostatic-hyperplasia?search=cunningham%20kadmon%202017%20benign%20prostatic&source=search\\_result&selectedTitle=2~150&usage\\_type=default&display\\_rank=2](https://www.uptodate.com/contents/clinical-manifestations-and-diagnostic-evaluation-of-benign-prostatic-hyperplasia?search=cunningham%20kadmon%202017%20benign%20prostatic&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2).

186 Mamoulakis, C., Efthimiou, I., Kazoulis, S., Christoulakis, I., and Sofras, F., "The Modified Clavien Classification System: A standardized platform for reporting complications in transurethral resection of the prostate," *World Journal of Urology*, 2011, vol. 29, pp. 205-210.

187 Roehrborn, C., Gange, S., Shore, N., Giddens, J., Bolton, D., Cowan, B., Rukstalis, D., "The Prostatic Urethral Lift for the Treatment of Lower Urinary Tract Symptoms Associated with Prostate Enlargement Due to Benign Prostatic Hyperplasia: The LIFT study," *The Journal of Urology*, 2013, vol. 190, pp. 2161-2167.

188 Sonksen, J., Barber, N., Speakman, M., Berges, R., Wetterauer, U., Greene, D., Gratzke, C., "Prospective, Randomized, Multinational Study of Prostatic Urethral Lift Versus Transurethral Resection of the Prostate: 12-month results from the BPH6 study," *European Association of Urology*, 2015, vol. 68, pp. 643-652.

189 Roehrborn, C., Gilling, P., Cher, D., and Templin, B., "The WATER Study (Waterjet Ablation Therapy for Endoscopic Resection of prostate tissue), Redwood City: PROCEPT BioRobotics Corporation, 2017

190 Cunningham, G. R., & Kadmon, D., 2017, "Clinical manifestations and diagnostic evaluation of benign prostatic hyperplasia," 2017. Available at: <https://www.uptodate.com/contents/clinical->

adverse events and long-term morbidity related to the TURP procedure increase with the size of the prostate.<sup>194</sup>

The applicant asserted that the AQUABEAM System provides superior safety outcomes as compared to the TURP procedure, while providing non-inferior efficacy in treating the symptoms that affect the lower urinary tract associated with a diagnosis of BPH. The applicant further stated that the AQUABEAM System yields consistent and predictable procedure and resection times regardless of the size and shape of the prostate and the surgeon's experience. Lastly, according to the applicant, the AQUABEAM System provides increased efficacy and safety for larger prostates as compared to the TURP procedure.

With respect to the newness criterion, FDA granted the applicant's *De Novo* request on December 21, 2017, for use in the resection and removal of prostate tissue in males suffering from lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia. The applicant stated that the AQUABEAM System was made available on the

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manifestations-and-diagnostic-evaluation-of-benign-prostatic-hyperplasia?search=cunningham%20kadmon%202017%20benign%20prostatic&source=search\_result&selectedTitle=2~150&usage\_type=default&display\_rank=2.

191 Mamoulakis, C., Efthimiou, I., Kazoulis, S., Christoulakis, I., Sofras, F., "The Modified Clavien Classification System: A standardized platform for reporting complications in transurethral resection of the prostate," *World Journal of Urology*, 2011, vol. 29, pp. 205-210.

192 Roehrborn, C., Gange, S., Shore, N., Giddens, J., Bolton, D., Cowan, B., Rukstalist, D., "The Prostatic Urethral Lift for the Treatment of Lower Urinary Tract Symptoms Associated with Prostate Enlargement Due to Benign Prostatic Hyperplasia: The LIFT study," *The Journal of Urology*, 2013, vol. 190, pp. 2161-2167.

193 Sonksen, J., Barber, N., Speakman, M., Berges, R., Wetterauer, U., Greene, D., Gratzke, C., "Prospective, Randomized, Multinational Study of Prostatic Urethral Lift Versus Transurethral Resection of the prostate: 12-month results from the BPH6 study," *European Association of Urology*, 2015, vol. 68, pp. 643-652.

194 Bachmann, A., Tubaro, A., Barber, N., d'Ancona, F., Muir, G., Witzsch, U., Thomas, J., "180-W XPS GreenLight Laser Vaporisation Versus Transurethral Resection of the Prostate for the Treatment of Benign Prostatic Obstruction: 6-month safety and efficacy results of a european multicentre randomised trial - the GOLIATH study," *European Association of Urology*, 2014, vol. 65, pp. 931-942.

U.S. market immediately after the FDA granted the *De Novo* request. Therefore, we stated in the proposed rule that if approved for new technology add-on payments, the newness period is considered to begin on December 21, 2017. CMS has approved the use of ICD-10-PCS code XV508A4 (Destruction of prostate using robotic waterjet ablation, via natural or artificial opening endoscopic, new technology group 4), effective October 1, 2018, to uniquely identify procedures involving the AQUABEAM System.

As discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for the purposes of new technology add-on payments.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant stated that the AQUABEAM System is the first technology to deliver treatment to patients who have been diagnosed with BPH for the symptoms that effect the lower urinary tract caused by BPH via Aquablation therapy. The AQUABEAM System utilizes intra-operative image guidance for surgical planning and then Aquablation therapy to robotically resect tissue utilizing a high-velocity waterjet. According to the applicant, all other BPH treatment procedures only utilize cystoscopic visualization, whereas the AQUABEAM System utilizes Aquablation therapy, a combination of cystoscopic visualization and intra-operative image guidance. According to the applicant, the AQUABEAM System’s use of Aquablation therapy qualifies it as the only technology to utilize a high-velocity room temperature waterjet for tissue resection, while most other BPH surgical procedures utilize thermal energy to resect prostatic tissue, or require the implantation of clips to pull

back prostatic tissue blocking the urethra. Lastly, according to the applicant, all other surgical modalities are executed by the operating surgeon, while the AQUABEAM System allows planning by the surgeon and utilization of Aquablation therapy ensures accurate and efficient tissue resection is autonomously executed by the robot.

With respect to the second criterion, whether a product is assigned to the same or a different MS-DRG, the applicant stated that potential cases representing potential patients who may be eligible for treatment involving the AQUABEAM System's Aquablation therapy technique will ultimately map to the same MS-DRGs as cases for existing BPH treatment options.

With respect to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant stated that the AQUABEAM System's Aquablation therapy will ultimately treat the same patient population as other available BPH treatment options. The applicant asserted that the AQUABEAM System's Aquablation therapy has been shown to be more effective and safer than the TURP procedure for patients with larger prostate sizes. The applicant stated that prostates 80 ml or greater in size are not appropriate for the TURP procedure and, therefore, more intensive procedures such as surgery are required. Furthermore, the applicant claimed that the AQUABEAM System's Aquablation therapy is particularly appropriate for smaller prostate sizes, ~30 ml, due to increased accuracy provided by both the computer assistance and ultrasound visualization.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20346), we stated we had the following concerns regarding whether the AQUABEAM System meets the newness criterion. Currently, there are many treatment options that utilize varying forms of ablation, such as mono and bipolar TURP procedures, laser, microwave, and radiofrequency, to treat the symptoms associated with a diagnosis of BPH. We stated that we were concerned that, while this device utilizes water to perform any tissue removal, its mechanism of action may not be different from that of other forms of treatment for patients who have been diagnosed with BPH. Further, the use of water to perform tissue removal in the treatment of associated symptoms in patients who have been diagnosed with BPH has existed in other areas of surgical treatment prior to the introduction of this product (for example, endometrial ablation and wound debridement). In addition, the standard operative treatment, such as with the TURP procedure, for patients who have been diagnosed with BPH is to widen the urethra compressed by an enlarged prostate in an effort to alleviate the negative effects of an enlarged prostate. Like other existing methods, the AQUABEAM System's Aquablation therapy also ablates tissue to relieve compression of the urethra. Additionally, while the robotic arm and computer programming may result in different outcomes for patients, we stated we were uncertain that the use of the robotic hand and computer programming result in a new mechanism of action. We invited public comments on this issue.

We also invited public comments on whether the AQUABEAM System's Aquablation therapy is substantially similar to existing technologies and whether it meets the newness criterion.

Comment: The applicant stated in regard to the beginning of the newness period that, while the AQUABEAM System received approval from the FDA for its *De Novo* request on December 21, 2017, local non-coverage determinations in the Medicare population resulted in the first case being delayed until April 19, 2018. Therefore, the applicant believed that the beginning date of the newness period should begin on April 9, 2018, instead of the date FDA granted the *De Novo* request.

Response: With regard to the beginning of the technology's newness period, as discussed in the FY 2005 IPPS final rule (69 FR 49003), the timeframe that a new technology can be eligible to receive new technology add-on payments begins when data begin to become available. While local non-coverage determinations may limit the use of a technology in different regions in the country, a technology may be available in regions where no local non-coverage decision existed (with data beginning to become available). Additionally, similar to the discussion in the FY 2006 IPPS final rule (70 FR 47349), we do not consider how frequently the medical service or technology has been used in the Medicare population in our determination of newness. We welcome further information from the applicant for consideration in future rulemaking regarding the beginning of the newness period.

Comment: The applicant reiterated in response to CMS' concerns regarding the mechanism of action of the AQUABEAM System that it is novel because of: (1) the real-time multi-dimensional imaging which enables improved clinical decision-making and personalized treatment planning; (2) the accuracy of the autonomous robotic hand piece which autonomously executes the surgeon's treatment plan for controlled and precise

tissue removal; and (3) the heat free submerged waterjet used to resect prostatic tissue which avoids the possibility of complications arising from thermal injury, and that these qualities result in consistently safe and effective outcomes for patients and greatly reduced chances of side effects when compared to TURP and further provide a minimally invasive transurethral alternative to open prostatectomy (OP) in large prostates. The applicant further indicated that each of the three components, individually, are unique to existing BPH surgical options and the combination of the three further represents the novelty of the technology's mechanism of action in the treatment of BPH.

The applicant also believed that CMS' concerns that the use of water to perform tissue removal may not be different than other forms of tissue removal in treating BPH, the use of water has been used in other areas such as endometrial ablation and wound debridement, and there is uncertainty that the use of a robotic hand and computer programming result in a new mechanism of action reflect a broad interpretation of mechanism of action. The applicant stated that the notion that all ablation techniques are similar ignores the fact that ablation is used to treat a variety of illnesses and conditions throughout the body using a variety of technological approaches with varying effectiveness. The applicant reiterated that it believed the three mechanisms of action of the AQUABEAM System are unique in prostate treatment when compared to all other existing prostate treatments, and the AQUABEAM System is the only ablation technique that utilizes room-temperature water whereas other ablative approaches such as TURP, laser vaporization (PVP), laser resection (HoLEP/ThuLEP), microwave necrosis (TUMT), and mechanical radio-frequency resection (open simple prostatectomy) utilize

heat as the primary mechanism of action. The applicant explained that the waterjet mechanism of action has the advantage of sparing sensitive tissues around the prostate like the bladder neck, verumontanum, and nerve and vascular tissues, whereas other ablative approaches are tissue agnostic. The applicant also disagreed with CMS' comparison of Aquablation therapy to wound debridement and tissue dissection because the surgical goals are different. The applicant stated that, in the application of wound debridement the surgical goal is wound cleansing and debris removal using a waterjet, and in tissue dissection, the goal is tissue separation or disassociating the parenchymal connective tissue. The applicant further stated, in contrast, the goal of all BPH surgical procedures is to remove excessive prostatic tissue. The applicant reiterated that the use of the robotic handpiece and computer programming is the essence of the AQUABEAM System to deliver Aquablation therapy, and these components allow the surgeon to visualize the prostate in a way that was previously unavailable in BPH surgery to precisely determine the specific prostatic tissue to resect, which is not possible with existing technologies. The applicant further indicated that the robotic handpiece autonomously executes the tissue resection, which has been clinically shown to provide consistent results, regardless of the prostate size or surgeon experience. The applicant believed that this differs from other treatment modalities, which rely on surgeon experience that introduces more variability into the procedure. The applicant stated that the robotic handpiece also facilitates the use of a minimally invasive transurethral approach to treat large prostates in which the vast majority of other transurethral technologies are not recommended.

The applicant also stated that CMS has not historically applied such a broad definition when defining and evaluating mechanism of action, as in example, for new technology add-on payments for the INTUITY and Perceval valves that are aortic valve replacements that share the surgical goal of providing the patient with a functioning aortic valve. The applicant noted that, CMS determined the mechanisms of action of the INTUITY and Perceval valves in achieving the surgical goal were not substantially similar to treatments that were available at the time, and both technologies were approved for new technology add-on payments. In addition, the applicant stated that drug-coated balloons (a new combination of existing balloon and existing drugs) have a surgical goal similar to non-drug coated balloons of creating a lumen in the artery, and CMS determined that the drug-coated balloons used a different mechanism of action and similarly approved both applications for new technology add-on payments. The applicant explained that, in the case of Aquablation therapy, the surgical goal is similar to other BPH technologies in creating an opening in the prostatic urethra. However, the applicant indicated, as described above, the mechanism of action is different from any other technologies currently available. The applicant believed that, applying the same criterion as applied in the historical examples, the AQUABEAM System meets the criteria for approval of new technology add-on payments.

The applicant also stated that for large prostates, the MS-DRG assignment for potential cases representing patients eligible for treatment involving the AQUABEAM System would be similar to normal transurethral prostate treatments, which is different than the MS-DRG assignment for open prostatectomy (OP). The applicant believed that

potential cases involving Aquablation therapy would group to MS-DRGs 713 and 714 (Transurethral Prostatectomy) and open simple prostatectomy procedures would group to MS-DRGs 707 and 708 (Major Male Pelvic Procedures). The applicant stated that, for prostates sized less than 80 ml, potential cases involving Aquablation therapy would map to the same MS-DRGs as other transurethral procedures, and for large prostates greater than 80 ml in size, procedures involving Aquablation therapy in lieu of an open prostatectomy would result in a different MS-DRG assignment. Therefore, the applicant believed AQUABEAM System's Aquablation therapy meets this criterion under substantial similarity.

Other commenters believed that the AQUABEAM System met the newness criterion. The commenters stated that the use of imaging and ultrasound, the autonomous robotic execution of the procedure, and the use of room temperature water rather than heat, combined make the AQUABEAM System a novel treatment for BPH. Another commenter further indicated that many other technologies are surgeon- and experience-dependent, whereas the AQUABEAM System's image guided procedure with robotic execution allows for a greater degree of precision and monitoring of the treatment independent of experience or expertise. The commenter believed that the addition of image guidance and robotic execution of the procedure leads to consistent results independent of surgeon experience.

Response: We appreciate the commenters' input. After consideration of these comments, we agree that the AQUABEAM System has a unique mechanism of action because it is the first to use waterjet ablation therapy that enables targeted, controlled,

heat-free and immediate removal of prostate tissue used for the purpose of treating lower urinary tract symptoms caused by a diagnosis of BPH. Therefore, after consideration of the public comments we received, we agree that the AQUABEAM System meets the newness criterion and the newness period beginning date is April 19, 2018.

With regard to the cost criterion, the applicant conducted the following analysis to demonstrate that the technology meets the cost criterion. Given that at the time of the analysis, the AQUABEAM System's Aquablation therapy procedure did not have a unique ICD-10-PCS procedure code, the applicant searched the FY 2016 MedPAR data file for cases with the following current ICD-10-PCS codes describing other BPH minimally invasive procedures to identify potential cases representing potential patients who may be eligible for treatment involving the AQUABEAM System's Aquablation therapy: 0V507ZZ (Destruction of prostate, via natural or artificial opening), 0V508ZZ (Destruction of prostate, via natural or artificial opening endoscopic), 0VT07ZZ (Resection of prostate, via natural or artificial opening), and 0VT08ZZ (Resection of prostate, via natural or artificial opening endoscopic). The applicant identified a total of 133 MS-DRGs using these ICD-10-PCS codes.

In order to calculate the standardized charges per case, the applicant conducted two analyses, based on 100 percent and 75 percent of identified claims in the FY 2016 MedPAR data file. The applicant based its analysis on 100 percent of claims mapping to 133 MS-DRGs, and 75 percent of claims mapping to 6 MS-DRGs. The cases identified in the 75 percent analysis mapped to MS-DRGs 665 (Prostatectomy with MCC), 666 (Prostatectomy with CC), 667 (Prostatectomy without CC/MCC), 713 (Transurethral

Prostatectomy with CC/MCC), 714 (Transurethral Prostatectomy without CC/MCC), and 988 (Non-Extensive O.R. Procedures Unrelated to Principal Diagnosis with CC). In situations in which there were fewer than 11 cases for individual MS-DRGs in the MedPAR data file, a value of 11 was imputed to ensure confidentiality for patients. When evaluating 100 percent of the cases identified, the applicant included low-volume MS-DRGs that had equal to or less than 11 total cases to represent potential patients who may be eligible for treatment involving the AQUABEAM System's Aquablation therapy in order to calculate the average case-weighted unstandardized and standardized charge amounts. The 75 percent analysis removed those MS-DRGs with 11 cases or less representing potential patients who may be eligible for treatment involving the AQUABEAM System's Aquablation therapy, resulting in only 6 of the 133 MS-DRGs remaining for analysis. A total of 8,449 cases were included in the 100 percent analysis and 6,285 cases were included in the 75 percent analysis.

Using the 100 percent and 75 percent samples, the applicant determined that the average case-weighted unstandardized charge per case was \$69,662 and \$47,475, respectively. The applicant removed 100 percent of total charges associated with the service category "Medical/Surgical Supply Charge Amount" (which includes revenue centers 027x and 062x) because the applicant believed that it was the most conservative choice, as this amount varies by MS-DRG. The applicant stated that the financial impact of utilizing the AQUABEAM System's Aquablation therapy on hospital resources other than on "Medical Supplies" is unknown at this time. Therefore, a value of \$0 was used for charges related to the prior technology.

The applicant standardized the charges, and inflated the charges using an inflation factor of 1.09357, from the FY 2018 IPPS/LTCH PPS final rule (82 FR 38524). The applicant then added the charges for the new technology. The applicant computed a final inflated average case-weighted standardized charge per case of \$69,588 for the 100 percent sample, and \$51,022 for the 75 percent sample. The average case-weighted threshold amount was \$59,242 for the 100 percent sample, and \$48,893 for the 75 percent sample. Because the final inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount for both analyses, the applicant maintained that the technology met the cost criterion.

We invited public comment regarding whether the technology meets the cost criterion.

Comment: The applicant reiterated the results of the cost analysis detailed in the FY 2019 IPPS/LTCH PPS proposed rule, and believed that the AQUABEAM System meets the cost criterion.

Response: We appreciate the applicant's input and agree that the AQUABEAM System meets the cost criterion.

With respect to the substantial clinical improvement criterion, the applicant asserted that the Aquablation therapy provided by the AQUABEAM System represents a substantial clinical improvement over existing treatment options for symptoms associated with the lower urinary tract for patients who have been diagnosed with BPH. Specifically, the applicant stated that the AQUABEAM System's Aquablation therapy provides superior safety outcomes compared to the TURP procedure, while providing

non-inferior efficacy in treating the symptoms that effect the lower urinary tract associated with a diagnosis of BPH; the AQUABEAM System's delivery of Aquablation therapy yields consistent and predictable procedure and resection times regardless of the size and shape of the prostate or the surgeon's experience; and the AQUABEAM System's Aquablation therapy demonstrated superior efficacy and safety for larger prostates (that is, prostates sized 50 to 80 ml) as compared to the TURP procedure.

The applicant provided the results of one Phase I and one Phase II trial published articles, the WATER Study Clinical Study Report, and a meta-analysis of current treatments with its application as evidence for the substantial clinical improvement criterion.

According to the applicant, the first study<sup>195</sup> enrolled 15 nonrandomized patients with a prostate volume between 25 to 80 ml in a Phase I trial testing the safety and feasibility of the AQUABEAM System's Aquablation therapy; all patients received the AQUABEAM System's Aquablation therapy. This study, a prospective, nonrandomized study, enrolled men who were 50 to 80 years old who were affected by moderate to severe lower urinary tract symptoms, who did not respond to standard medical therapy.<sup>196</sup> Follow-up assessments were conducted at 1, 3, and 6 months and included information on adverse events, serum PSA level, uroflowmetry, PVR, quality of life, and the International Prostate Symptom Score (IPSS) and International Index of Erectile Function (IIEF) scores. The primary outcome was the assessment of safety as measured by

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<sup>195</sup> Gilling, P., Reuther, R., Kahokehr, A., Fraundorfer, M., "Aquablation - Image-guided Robot-assisted Waterjet Ablation of the Prostate: Initial clinical experience," *British Journal of Urology International*, 2016, vol. 117, pp. 923-929.

<sup>196</sup> Ibid.

adverse event reporting; secondary endpoints focused on alleviation of BPH symptoms.<sup>197</sup>

The applicant indicated that 8 of the 15 patients who were enrolled in the trial had at least 1 procedure-related adverse event (for example, catheterization, hematuria, dysuria, pelvic pain, bladder spasms), which the authors reported to be consistent with outcomes from minimally-invasive transurethral procedures.<sup>198</sup> There were no occurrences of incontinence, retrograde ejaculation, or erectile dysfunction at 30 days.<sup>199</sup> Statistically significant improvement on all outcomes occurred over the 6-month period. Average IPSS scores showed a negative slope with scores of 23.1, 11.8, 9.1, and 8.6 for baseline, 1 month, 3 months, and 6 months ( $p < 0.01$  in all cases). Average quality of life scores, which range from 1 to 5, where 1 is better and 5 is worse, decreased from 5.0 at baseline to 2.6 at 1 month, 2.2 at 3 months, and 2.5 at 6 months. Average maximum urinary flow rate increased steadily across time points from 8.6 ml/s at baseline to 18.6 ml/s at 6 months. Lastly, average post-void residual urine volume decreased from 91 ml at baseline to 38 ml at 1 month, 60 ml at 3 months, and 30 ml at 6 months.<sup>200</sup>

The second study<sup>201</sup> presents results from a Phase II trial involving 21 men with a prostate volume between 30 to 102 ml who received treatment involving the AQUABEAM System's Aquablation therapy with follow-up at 1 year. This prospective study enrolled men between the ages of 50 and 80 years old who were effected by moderate to severe

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<sup>197</sup> Ibid.

<sup>198</sup> Gillig, P., Anderson, P., and Tan, A., "Aquablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: 1-Year results," *The Journal of Urology*, 2017, vol. 197, pp. 156-1572.

<sup>199</sup> Ibid.

<sup>200</sup> Gillig, P., Anderson, P., and Tan, A., "Aquablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: 1-Year results," *The Journal of Urology*, 2017, vol. 197, pp. 156-1572.

<sup>201</sup> Ibid.

symptomatic BPH.<sup>202</sup> The primary end point was the rate of adverse events; the secondary end points measured alleviation of symptoms associated with a diagnosis of BPH. Data was collected at baseline and at 1 month, 3 months, 6 months, and 12 months; 1 patient withdrew at 3 months. The authors asserted that the occurrence of post-operative adverse events (urinary retention, dysuria, hematuria, urinary tract infection, bladder spasm, meatal stenosis) were consistent with other minimally-invasive transurethral procedures;<sup>203</sup> 6 patients had at least 1 adverse event, including temporary urinary symptoms and medically-treated urinary tract infections.<sup>204</sup> The mean IPSS scores decreased from the baseline of 22.8 with 11.5 at 1 month, 7 at 3 months, 7.1 at 6 months, and 6.8 at 12 months and were statistically significantly different. Similarly, quality of life decreased from a mean score of 5 at baseline to 1.7 at 12 months, all time points were statistically significantly different from the baseline.

The third document provided by the applicant is the Clinical Study Report: WATER Study,<sup>205</sup> a prospective multi-center, randomized, blinded study. The WATER Study compared the AQUABEAM System's Aquablation therapy to the TURP procedure for the treatment of lower urinary tract symptoms associated with a diagnosis of BPH. One hundred eighty one (181) patients with prostate volumes between 30 and 80 ml were randomized, 65 patients to the TURP procedure group and the other 116 to the AQUABEAM System's Aquablation therapy group, with 176 (97 percent of patients) continuing at 3 and 6 month follow-up, where 2 missing patients received treatment

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<sup>202</sup> Ibid.

<sup>203</sup> Ibid.

<sup>204</sup> Ibid.

<sup>205</sup> Roehrborn, C., Gilling, P., Cher, D., Templin, B., "The WATER Study (Waterjet Ablation Therapy for Endoscopic Resection of prostate tissue)," Redwood City: PROCEPT BioRobotics Corporation, 2017.

involving the AQUABEAM System's Aquablation therapy and 3 received treatment involving the TURP procedure; randomization efficacy was assessed and confirmed with findings of no statistical differences between cases and controls among all characteristics measures, specifically prostate volume. Two primary endpoints were identified: (1) the safety endpoint was the proportion of patients with adverse events rates as "probably or definitely related to the study procedure" also classified as the Clavien-Dindo (CD) Grade 2 or higher or any Grade 1 resulting in persistent disability; and (2) the primary efficacy endpoint was a change in the IPSS score from baseline to 6 months. Three secondary endpoints were based on perioperative data and were: length of hospital stay, length of operative time, and length of resection time. The occurrences of three secondary endpoints during the 6-month follow-up were: (1) reoperation or reintervention within 6 months; (2) evaluation of proportion of sexually active patients; and (3) evaluation of proportion of patients with major adverse urologic events.

At 3 months, 25 percent of the patients in the AQUABEAM System's Aquablation therapy group and 40 percent of the patients in the TURP group had an adverse event. The difference of -15 percent has a 95 percent confidence interval of -29.2 and -1.0 percent. At 6 months, 25.9 percent of the patients in the AQUABEAM System's Aquablation therapy group and 43.1 percent of the patients in the TURP group had an adverse event. The difference of -17 percent has a 95 percent confidence interval of -31.5 to -3.0 percent. An analysis of safety events classified with the CD system as possibly, probably or definitely related to the procedure resulted in a CD Grade 1 persistent event difference between -17.7 percent (favoring the AQUABEAM System's

Aquablation therapy) with 95 percent confidence interval of -30.1 to -7.2 percent and a CD Grade 2 or higher event difference of -3.3 percent with 95 percent confidence interval of -16.5 to 8.7 percent.

The applicant indicated that the primary efficacy endpoint was assessed by a change in IPSS score over time. While change in score and change in percentages are generally higher for the AQUABEAM System's Aquablation therapy, no statistically significant differences occurred between the AQUABEAM System's Aquablation therapy and the TURP procedure over time. For example, the AQUABEAM System's Aquablation therapy group experienced changes in IPSS mean score by visit of 0, -3.8, -12.5, -16.0, and -16.9 at baseline, 1 week, 1 month, 3 months, and 6 months, respectively, while the TURP group had mean scores of 0, -3.6, -11.1, -14.6, and -15.1 at baseline, 1 week, 1 month, 3 months, and 6 months, respectively.

Lastly, the applicant indicated that secondary endpoints were assessed. A mean length of stay for both the AQUABEAM System's Aquablation therapy and the TURP procedure groups of 1.4 was achieved. While the mean operative times were similar, the hand piece in and out time was statistically significantly shorter for the AQUABEAM System's Aquablation therapy group at 23.3 minutes as compared to 34.2 in the TURP procedure group. The mean resection time was 23 minutes shorter for the AQUABEAM System's Aquablation therapy group at 3.9 minutes. No statistically significant difference was seen between the AQUABEAM System's Aquablation therapy and the TURP procedure groups on the outcomes of re-intervention and worsening sexual function; 32.9 percent of the AQUABEAM System's Aquablation therapy group had

worsening sexual function as compared to 52.8 percent of the TURP procedure group. While statistically significant differences occurred across groups for change in ejaculatory function, the difference no longer remained at 6 months. While a greater proportion of the TURP procedure group patients experienced a negative change in erectile function as compared to the AQUABEAM System's Aquablation therapy group patients (10 percent versus 6.2 percent at 6 months), no statistically significant differences occurred. No statistically significant differences between groups occurred for major adverse urologic events.

The applicant provided a meta-analysis of landmark studies regarding typical treatments for patients who have been diagnosed with BPH in order to provide supporting evidence for the assertion of superior outcomes achieved with the use of the AQUABEAM System's Aquablation therapy. The applicant cited four "landmark clinical trials," which report on the AQUABEAM System's Aquablation therapy,<sup>206</sup> the TURP procedure, Green light laser versus the TURP procedure,<sup>207</sup> and Urolift.<sup>208</sup> Comparisons are made between performance outcomes on three separate treatments for patients who have been diagnosed with BPH: the AQUABEAM System's Aquablation therapy, the TURP procedure, and Urolift. The applicant stated that all three clinical trials included men with average IPSS

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<sup>206</sup> Roehrborn, C., Gilling, P., Cher, D., Templin, B., "The WATER Study (Waterjet Ablation Therapy for Endoscopic Resection of prostate tissue)," Redwood City: PROCEPT BioRobotics Corporation, 2017.

<sup>207</sup> Bachmann, A., Tubaro, A., Barber, N., d'Ancona, F., Muir, G., Witzsch, U., Thomas, J., "180-W XPS GreenLight Laser Vaporisation Versus Transurethral Resection of the Prostate for the Treatment of Benign Prostatic Obstruction: 6-month safety and efficacy results of a european multicentre randomised trial - the GOLIATH study," *European Association of Urology*, 2014, vol. 65, pp. 931-942.

<sup>208</sup> Sonksen, J., Barber, N., Speakman, M., Berges, R., Wetterauer, U., Greene, D., Gratzke, C., "Prospective, Randomized, Multinational Study of Prostatic Urethral Lift Versus Transurethral Resection of the Prostate: 12-month results from the BPH6 study," *European Association of Urology*, 2015, vol. 68, pp. 643-652.

baseline scores of 21 to 23 points. The applicant stated that, while total procedure times are similar across all three treatment options, the AQUABEAM System's Aquablation therapy has dramatically less time and variability associated with the tissue treatment. The applicant further stated that the differences between treatment options were not assessed for statistical significance. The applicant indicated that the AQUABEAM System's Aquablation therapy, with an approximate score of 17, had the largest improvement in IPSS scores at 6 months as compared to 16 for the TURP procedure and 11 for Urolift. Compared to 46 percent in the TURP group, the applicant found that the AQUABEAM System's Aquablation therapy and Urolift had much lower percentages, 4 percent and 0 percent, respectively, of an ejaculation-related consequence in patients. Lastly, the applicant stated that safety events, as measured by the percentage of CD Grade 2 or higher events, were lower in the AQUABEAM System's Aquablation therapy (19 percent) and Urolift (14 percent) than in TURP (29 percent).

In the FY 2019 IPPS/LTCH proposed rule (83 FR 20349), we stated that we have several concerns related to the substantial clinical improvement criterion. The applicant performed a meta-analysis comparing results from three separate studies, which tested the effects of three separate treatment options. According to the applicant, the results provided consistently show the AQUABEAM System's Aquablation therapy and Urolift as being superior to the standard treatment of the TURP procedure. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20349), we stated we have concerns with the interpretation of these results that the applicant provided. We noted that the comparison of multiple clinical studies is a difficult issue, and it was not clear if the applicant took

into account the varying study designs, sample techniques, and other study specific issues, such as physician skill and patient health status. For instance, the applicant stated that a comparison of Urolift and the AQUABEAM System's Aquablation therapy may not be appropriate due to the differing indications of the procedures; the applicant indicated that Urolift is primarily used for the treatment of patients who have been diagnosed with BPH who have smaller prostate volumes, whereas the AQUABEAM System's Aquablation therapy procedure may be used in all prostate sizes. Similarly, the applicant stated that the TURP procedure is generally not utilized in patients with prostates larger than 80 ml, whereas such patients may be eligible for treatment involving the AQUABEAM System's Aquablation therapy.

We noted that the applicant submitted a meta-analysis in an effort to compare currently available therapies to the AQUABEAM System's Aquablation therapy. We stated that the possibility of the heterogeneity of samples and methods across studies leads to the possible introduction of bias, which results in the difficulty or inability to distinguish between bias and actual outcomes. We invited public comments on the applicability of this meta-analysis.

Comment: The applicant stated in response to CMS' concerns in regard to the meta-analysis that the meta-analysis was performed with the cited studies because of the similarities in geography where enrolled, inclusion of similar prostate size (30 to 80 ml), and the randomization against the same control of TURP. The applicant indicated that the objective of the analysis was to compare the reduced safety profile in ejaculatory dysfunction of Aquablation therapy compared to TURP as demonstrated in the WATER

study, as well as to compare the safety profile of Aquablation therapy to the UroLift procedure.

Response: We appreciate the applicant's response and have taken this new information into consideration in making a final determination, as indicated below.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20349), we indicated that we had a concern that the differences between the AQUABEAM System's Aquablation therapy and standard treatment options may not be as impactful and confined to safety aspects. We stated that it appears that the data on efficacy supported the equivalence of the AQUABEAM System's Aquablation therapy and the TURP procedure based upon noninferiority analysis. In the proposed rule, we stated we agree with the applicant that the safety data were reported as showing superiority of the AQUABEAM System's Aquablation therapy over the TURP procedure, although the data were difficult to track because adverse consequences were combined into categories; the AQUABEAM System's Aquablation therapy was reportedly better in terms of ejaculatory function. It was noted in the application that, while the AQUABEAM System's Aquablation therapy was statistically superior to the TURP procedure in the CD Grade 1 + adverse events, it was not statistically different in the CD Grade 2 or greater category. The applicant stated that regardless of the method, the urethra is typically used as the means for performing the BPH treatment procedure, which necessarily increases the likelihood of CD Grade 2 adverse events in all transurethral procedures.

In addition, the applicant noted that the treatment option may depend on the size of the prostate. The applicant stated that the AQUABEAM System's Aquablation therapy

is appropriate for small and large prostate sizes as a BPH treatment procedure. The AQUABEAM System's Aquablation therapy has been shown to have limited positive outcomes as compared to the TURP procedure for prostates sized greater than 50 grams to 80 grams in each of the studies provided by the applicant. However, the applicant noted that the TURP procedure would not be used for prostates larger than 80 grams in size. Therefore, we stated in the proposed rule that we believe that another proper comparator for the AQUABEAM System's Aquablation therapy may be laser or radical/open surgical procedures given their respective indication for small and large prostate sizes.

Lastly, the applicant compared AQUABEAM System's Aquablation therapy and the standard of care TURP procedure to support a finding of improved safety. We stated that there are other treatment modalities available that may have a similar safety profile as the AQUABEAM System's Aquablation therapy and we are interested in information that compares the AQUABEAM System's Aquablation therapy to other treatment modalities.

We invited public comments on whether the AQUABEAM System's Aquablation therapy meets the substantial clinical improvement criterion.

Comment: In response to CMS' concerns from the proposed rule that, while the WATER safety data showed superiority, adverse consequences were difficult to track because the data were combined into a composite endpoint, the applicant explained that in the WATER study a CD1+ event was defined as involving persistent bladder spasms, bleeding, dysuria, pain, retrograde ejaculation, urethral damage, urinary retention, urinary

tract infection, and urinary urgency/frequency/difficulty/leakage. The applicant stated that data from the WATER study show Aquablation therapy was statistically superior to TURP in CD Grade 1+ adverse events. The applicant indicated that CD2 and above events are defined as those requiring pharmacological treatment, blood transfusions, endoscopic, surgical, or radiological interventions. The applicant stated that, after removal of the ejaculatory dysfunction events from the composite safety endpoint, the rate of CD2 and above adverse events for Aquablation therapy as compared to TURP was 19.8 percent and 23.1 percent, respectively.

In response to CMS' concern with regard to the WATER study finding of Aquablation's improved safety relative to TURP and that other treatment modalities demonstrate safety profiles similar to Aquablation, the applicant stated that, while this may be true, treatment modalities such as TUIP, TUNA/RF, Microwave, and PUL have inferior efficacy to TURP in a variety of objective and subjective measures including peak urine flow, PVR reduction and BPH symptom reduction.<sup>209</sup> However, the applicant indicated that, because the WATER study showed Aquablation efficacy similar to TURP for all prostate sizes and superiority in prostates sized 50 to 80 ml in volume, and that TURP shows superior efficacy to these other treatment modalities, Aquablation therapy offers an overall clinical improvement relative to these alternative treatment modalities.

In response to CMS' concern that Aquablation has limited positive outcomes for prostates sized 50 to 80 ml, the applicant stated that in a pre-specified subgroup analysis

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<sup>209</sup> Christidis, D., McGrath, S., Perera, M., Manning, T., Bolton, D., & Lawrentschuk, N., "Minimally invasive surgical therapies for benign prostatic hypertrophy: The rise in minimally invasive surgical therapies," *Prostate International*, 2017, pp. 41-46.

the WATER study showed superior safety and efficacy in prostates sized 50 to 80 ml compared to TURP. The applicant indicated that, in fact, because the subset analysis of men with prostates sized 50 to 80 ml in volume demonstrated Aquablation's superior outcomes over the TURP arm of the WATER study, the applicant sought to assess the efficacy and safety of the procedure in men with even larger prostates in the follow up WATER II study, which included prostates in sizes greater than 80 ml.

In response to CMS' concern that Aquablation therapy performed on larger prostates should be compared with laser (that is, HoLEP) and open simple prostatectomy procedures, the applicant stated that between September and December 2017, 101 men (67 percent were Medicare eligible) with moderate-to-severe BPH symptoms and prostates sized 80 to 150 ml in volume underwent Aquablation therapy in the prospective multi-center international WATER II clinical trial. The applicant indicated that, as noted above, the American Urological Association (AUA) BPH surgical guidelines recommend open simple prostatectomy or laser enucleation for the treatment of large prostates (>80 ml in volume). The applicant explained that the primary purpose of the WATER II was to assess the safety profile for Aquablation therapy in larger prostates. The applicant stated that the overall CD Grades 2, 3, and 4 complications were recorded in 19 percent, 11 percent, and 5 percent, respectively.<sup>210</sup> The applicant further stated that postoperative bleeding after Aquablation therapy that required transfusion (N=6, 5.9 percent) and/or cystoscopy with clot evacuation/fulguration (N=2, 2.0 percent) was observed in 8 patients

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<sup>210</sup> Mihir, D., Bidar, M., Bhojani, N., Trainer, A., Arther, A., Kramolowsky, E., Doumanian, L., et al., "WATER II (80-150 mL) Procedural Outcomes," 2018, *BJU International*.

during the procedural hospitalization.<sup>211</sup> The applicant stated that these results compare favorably to simple prostatectomy because the severe hemorrhage rate (defined as patients with a diagnosis related to hemorrhage and those who underwent transfusion) has been reported as high as 29 percent (range 12 to 29 percent) based on a claims analysis of 35,171 patients<sup>212</sup> who underwent the procedure. The applicant stated that Aquablation therapy has an average length of stay of 1.6 days compared to an average length of stay of 5 days for prostatectomy. The applicant further indicated that transfusion rates for the AQUABEAM System were less than those for the simple prostatectomy procedure. The applicant explained that the AQUABEAM procedure is technically feasible even for surgeons with low or no prior experience, and open prostatectomy has higher morbidity rates, longer hospital stays, and longer catheter times than those for the AQUABEAM System.

In response to CMS' concern regarding the appropriateness of the AQUABEAM System for prostates of smaller sizes (for example, < 30 mls), the applicant apologized for any inference in its application regarding smaller prostate sizes because it was not its intention to make any specific claims regarding smaller prostates.

Other commenters also believed that the AQUABEAM System represented a substantial clinical improvement. Another commenter stated that all of its treated patients experienced improved urinary flow and decreased BPH symptoms following treatment with the AQUABEAM System. The commenter further stated that treated

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<sup>211</sup> Ibid.

<sup>212</sup> Pariser, J., Pearce, S., Patel, S., & Bales, G., "National Trends of Simple Prostatectomy for Benign Prostatic Hyperplasia with and Analysis of Risk Factors for Adverse Perioperative Outcomes," 2015, *Urology*, vol. 86(4).

patients appreciated the preservation of ejaculatory function and indicated they would undergo the procedure again. Two commenters summarized results from the WATER II study, a single-arm study of the AQUABEAM System in patients diagnosed with BPH with > 80 ml prostate volumes, and stated that the AQUABEAM System decreases operative time, time under anesthesia, decreases the length of inpatient stays, and has fewer complications as compared to open prostatectomy, which is the standard treatment for large prostates greater than 80 ml in volume. Another commenter with an interest in providing the AQUABEAM therapy at its facility stated that, if an adequate payment is provided for the therapy, increased volume will most likely reduce the cost of this method of treatment.

Response: We appreciate the additional information provided by the applicant and the commenters' input. We agree that the results of the WATER study are statistically significant (95 percent confidence interval of the difference between AQUABEAM and TURP) and superior to TURP in safety as evidenced by a lower proportion of persistent CD Grade 1 adverse events at 3 months (which measured in totality Bladder spasm, Bleeding, Dysuria, Pain, Retrograde ejaculation, Urethral damage, Urinary retention, Urinary tract infection, Urinary urgency/frequency/difficulty/leakage). Additionally, patients enrolled in the WATER study with prostate sizes greater than 50 ml in volume and treated with Aquablation therapy had superior IPSS improvement than those treated with TURP, as well as better peak urinary flow rates (Qmax) at 6 months, and improved ejaculatory function and incontinence scores at 3 months. Results from the WATER II study for patients with

large prostate volumes demonstrate better outcomes of the AQUABEAM System over the standard-of-care, the open prostatectomy, regarding less operative time, decreased length of stay, and decreased rates of severe hemorrhage and transfusions. Based on the results above, we have determined the AQUABEAM System represents a substantial clinical improvement for the resection and removal of prostate tissue in males suffering from lower urinary tract symptoms due to benign prostatic hyperplasia.

After consideration of the public comments we received, we have determined that the AQUABEAM System's Aquablation therapy meets all of the criteria for approval of new technology add-on payments. Therefore, we are approving new technology add-on payments for the AQUABEAM System for FY 2019. Cases involving the AQUABEAM System that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure code XV508A4 (Destruction of prostate using robotic waterjet ablation, via natural or artificial opening endoscopic, new technology group 4).

In its application, the applicant estimated that the average Medicare beneficiary would require the transurethral procedure of one AQUABEAM System per patient. According to the application, the cost of the AQUABEAM System is \$2,500 per procedure. Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology, or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of the AQUABEAM System's Aquablation System is \$1,250 for FY 2019. In accordance with the current indication for the AQUABEAM

System, CMS expects that the AQUABEAM System will be used in the treatment for adult patients experiencing lower urinary tract symptoms caused by a diagnosis of BPH.

j. AndexXa™ (Andexanet alfa)

Portola Pharmaceuticals, Inc. (Portola) submitted an application for new technology add-on payments for FY 2019 for the use of AndexXa™ (Andexanet alfa). (We note that the applicant previously submitted applications for new technology add-on payments for FY 2017 and FY 2018 for Andexanet alfa, which were withdrawn). In the proposed rule, we discussed AndexXa™ as a reversal agent for patients treated with direct and indirect Factor Xa inhibitors when reversal of anticoagulation is needed due to life-threatening or uncontrolled bleeding. AndexXa™ received FDA approval on May 3, 2018, and is indicated for use in the treatment of patients treated with rivaroxaban and apixaban, when reversal of anticoagulation is needed due to life-threatening or uncontrolled bleeding. According to the FDA-approved prescribing information, AndexXa™ has not been shown to be effective for, and is not indicated for, the treatment of bleeding related to any Factor Xa inhibitors other than the direct Factor Xa inhibitors apixaban and rivaroxaban. Therefore, in this final rule, we discuss AndexXa™ in the context of the FDA-approved indication as a treatment of an anticoagulation reversal agent for rivaroxaban and apixaban only due to life-threatening or uncontrolled bleeding.

AndexXa™ is an antidote used to treat patients who are receiving treatment with the Factor Xa inhibitors rivaroxaban and apixaban when reversal of anticoagulation is needed due to life-threatening or uncontrolled bleeding. Patients at high risk for thrombosis, including those who have been diagnosed with atrial fibrillation (AF) and

venous thrombosis (VTE), typically receive treatment using long-term oral anticoagulation agents. Factor Xa inhibitors are oral anticoagulants used to prevent stroke and systemic embolism in patients who have been diagnosed with AF. These oral anticoagulants are also used to treat patients who have been diagnosed with deep-vein thrombosis (DVT) and its complications, pulmonary embolism (PE), and patients who have undergone knee, hip, or abdominal surgery. Rivarobaxan (Xarelto<sup>®</sup>), apixaban (Eliquis<sup>®</sup>), betrixaban (Bevyxxa<sup>®</sup>), and edoxaban (Savaysa<sup>®</sup>) are included in the new class of Factor Xa inhibitors, and are often referred to as “novel oral anticoagulants” (NOACs) or “non-vitamin K antagonist oral anticoagulants.” Although these anticoagulants have been commercially available since 2011, prior to May 3, 2018, there was no FDA-approved therapy used for the urgent reversal of Factor Xa inhibitors rivarobaxan and apixaban as a result of serious bleeding episodes.

As stated above, AndexXa<sup>™</sup> received FDA approval on May 3, 2018, and is indicated for use in the treatment of patients treated with rivaroxaban and apixaban, when reversal of anticoagulation is needed due to life-threatening or uncontrolled bleeding. The applicant received approval for two unique ICD–10–PCS procedure codes that became effective October 1, 2016 (FY 2017). The approved ICD-10-PCS procedure codes are: XW03372 (Introduction of Andexanet alfa, Factor Xa inhibitor reversal agent into peripheral vein, percutaneous approach, new technology group 2); and XW04372 (Introduction of Andexanet alfa, Factor Xa inhibitor reversal agent into central vein, percutaneous approach, new technology group 2).

With regard to the “newness” criterion, as discussed earlier, if a technology meets all three of the substantial similarity criteria, it would be considered substantially similar to an existing technology and would not be considered “new” for purposes of new technology add-on payments. AndexXa™ is the first and the only antidote available to treat patients receiving apixaban and rivaroxaban who suffer a major bleeding episode and require urgent reversal of anticoagulation. Other anticoagulant reversal agents, such as Kcentra™ and idarucizumab, do not reverse the effects of apixaban and rivaroxaban. Therefore, the applicant asserted that the technology is not substantially similar to any other currently approved and available treatment options for Medicare beneficiaries. We discussed the applicant’s assertions in the context of the three substantial similarity criteria in the proposed rule, as also discussed below.

With regard to the first criterion, whether a product uses the same or a similar mechanism of action to achieve a therapeutic outcome, the applicant indicated that AndexXa™ is the first anticoagulant reversal agent that binds to apixaban and rivaroxaban with high affinity, thereby sequestering the inhibitors and consequently rapidly reducing free plasma concentration of these Factor Xa inhibitors. The applicant asserted that this mechanism of action neutralizes the inhibitors’ anticoagulant effect, which allows for the restoration of normal hemostasis. According to the applicant, AndexXa™ represents a significant therapeutic advance because it provides rapid reversal of the anticoagulation effect of apixaban and rivaroxaban in the event of a serious bleeding episode where other anticoagulant reversal agents, such as Kcentra™ and idarucizumab, do not reverse the effects of these Factor Xa inhibitors.

With regard to the second criterion, whether a product is assigned to the same or a different MS–DRG, the applicant stated that AndexXa™ is the first FDA-approved anticoagulant reversal agent for patients receiving rivaroxaban and apixaban, and the first reversal agent to be FDA-approved for these Factor Xa inhibitors. The applicant further stated that other anticoagulant reversal agents, such as Kcentra™ and idarucizumab, do not reverse the effects of these Factor Xa inhibitors. Therefore, the MS–DRGs do not contain cases that represent patients who have been treated with any anticoagulant reversal agents for these Factor Xa inhibitors.

With regard to the third criterion, whether the new use of the technology involves the treatment of the same or similar type of disease and the same or similar patient population, the applicant indicated that AndexXa™ is the only anticoagulant reversal agent available for treating patients who are receiving treatment with apixaban or rivaroxaban who experience serious, uncontrolled bleeding events or who require emergency surgery. Therefore, the applicant believed that AndexXa™ would be the first type of treatment option available to this patient population. As a result, we stated in the proposed rule that we believe that it appears that AndexXa™ is not substantially similar to any existing technologies. We invited public comments on whether AndexXa™ meets the substantial similarity criteria, and whether AndexXa™ meets the newness criterion.

Comment: The applicant reiterated that AndexXa™ satisfies the newness criterion. With respect to mechanism of action, the applicant reiterated that AndexXa™ rapidly binds to apixaban and rivaroxaban with high affinity, acting as a decoy molecule that sequesters the inhibitors to rapidly reduce the free plasma concentrations and

neutralize their anticoagulant effects to allow restoration of normal hemostasis. With respect to treating the same or similar type of disease and the same or similar patient population, the applicant further indicated that, as the first and only FDA-approved antidote available for a patient population receiving treatment using apixaban or rivaroxaban who suffer a major bleeding episode and require urgent reversal of direct Factor Xa coagulation of these Factor Xa inhibitors, AndexXa™ is not substantially similar to any other currently approved and available treatment options for Medicare beneficiaries. The applicant emphasized that, prior to the approval of AndexXa™, the management of bleeding events in patients taking the Factor Xa inhibitors apixaban and rivaroxaban had been predicated on blood transfusions (that is, whole blood, packed red blood cells (RBCs), fresh frozen plasma (FFP), and/or platelets), or the use of a number of replacement clotting factor therapies (for example, fresh frozen plasma, Prothrombin Complex Concentrates (PCC), and recombinant activated Factor VIIa) -- all of which are supportive measures that do not reverse the Factor Xa activity of these inhibitors. Finally, with respect to MS-DRG assignment, because AndexXa™ is the first and only FDA-approved reversal agent of Factor Xa inhibitor for the treatment of patients receiving apixaban and rivaroxaban who experience life-threatening or uncontrolled bleeding or require emergency surgery, and the first reversal agent to be approved for these Factor Xa inhibitors, the applicant believed that the MS-DRGs do not contain any cases that represent patients treated with AndexXa™ as a reversal agent for these Factor Xa inhibitors.

Other commenters stated that AndexXa™ meets the newness criterion and is not substantially similar to any existing technologies because there is no other reversal agent available on the U.S. market for patients who are being treated with these Factor Xa inhibitors and experience severe bleeding. These commenters stated that other anticoagulant reversal agents do not reverse the effects of these Factor Xa inhibitors.

Response: We appreciate the commenters’ and the applicant’s input on whether AndexXa™ meets the newness criterion. After review of the information provided by the applicant and consideration of the public comments we received, we believe that AndexXa™ meets the newness criterion and consider the beginning of the technology’s newness period to be May 3, 2018, when the technology received FDA approval.

With regard to the cost criterion, we stated in the proposed rule that the applicant researched the FY 2015 MedPAR claims data file for potential cases representing patients who may be eligible for treatment using AndexXa™. The applicant used three sets of ICD–9–CM codes to identify these cases: (1) codes identifying potential cases representing patients who were treated with an anticoagulant and, therefore, who are at risk of bleeding; (2) codes identifying potential cases representing patients with a history of conditions that were treated with Factor Xa inhibitors; and (3) codes identifying potential cases representing patients who experienced bleeding episodes as the reason for the current admission. The applicant included with its application the following table displaying a complete list of ICD–9–CM codes that met its selection criteria.

<b>ICD-9-CM Codes Applicable</b>	<b>Applicable ICD-9-CM Code Description</b>
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<b>ICD-9-CM Codes Applicable</b>	<b>Applicable ICD-9-CM Code Description</b>
V12.50	Personal history of unspecified circulatory disease
V12.51	Personal history of venous thrombosis and embolism
V12.52	Personal history of thrombophlebitis
V12.54	Personal history of transient ischemic attack (TIA), and cerebral infarction without residual deficits
V12.55	Personal history of pulmonary embolism
V12.59	Personal history of other diseases of circulatory system
V43.64	Hip joint replacement
V43.65	Knee joint replacement
V58.43	Aftercare following surgery for injury and trauma
V58.49	Other specified aftercare following surgery
V58.73	Aftercare following surgery of the circulatory system, NEC
V58.75	Aftercare following surgery of the teeth, oral cavity and digestive system, NEC
V58.61	Long-term (current) use of anticoagulants
E934.2	Anticoagulants causing adverse effects in therapeutic use
99.00	Perioperative autologous transfusion of whole blood or blood components
99.01	Exchange transfusion
99.02	Transfusion of previously collected autologous blood
99.03	Other transfusion of whole blood
99.04	Transfusion of packed cells
99.05	Transfusion of platelets
99.06	Transfusion of coagulation factors
99.07	Transfusion of other serum

The applicant identified a total of 51,605 potential cases that mapped to 683 MS- DRGs, resulting in an average case-weighted charge per case of \$72,291. The applicant also provided an analysis that was limited to cases representing 80 percent of all potential cases identified (41,255 cases) that mapped to the top 151 MS-DRGs. Under

this analysis, the average case-weighted charge per case was \$69,020. The applicant provided a third analysis that was limited to cases representing 25 percent of all potential cases identified (12,873 cases) that mapped to the top 9 MS-DRGs. This third analysis resulted in an average case-weighted charge per case of \$46,974.

Under each of these analyses, the applicant also provided sensitivity analyses based on variables representing two areas of uncertainty: (1) whether to remove 40 percent or 60 percent of blood and blood administration charges; and (2) whether to remove pharmacy charges based on the ceiling price of factor eight inhibitor bypass activity (FEIBA), a branded anti-inhibitor coagulant complex, or on the pharmacy indicator 5 (PI5) in the MedPAR data file, which correlates to potential cases utilizing generic coagulation factors. Overall, the applicant conducted twelve sensitivity analyses, and provided the following rationales:

- The applicant chose to remove 40 percent and 60 percent of blood and blood administration charges because potential patients who may be eligible for treatment using AndexXa™ for Factor Xa reversal may still require blood and blood products to treat other conditions. Therefore, the applicant believed that it would be inappropriate to remove all of the charges associated with blood and blood administration because all of the charges cannot be attributed to Factor Xa reversal. The applicant maintained that the amounts of blood and blood products required for treatment vary according to the severity of the bleeding. Therefore, the applicant stated that the use of AndexXa™ may replace 60 percent of blood and blood product administration charges for potential cases

with less severity of bleeding, but only 40 percent of charges for potential cases with more severe bleeding.

- The applicant maintained that FEIBA is the highest priced clotting factor used for Factor Xa inhibitor reversal, and it is unlikely that pharmacy charges for Factor Xa reversal would exceed the FEIBA ceiling price of \$2,642. Therefore, the applicant capped the charges to be removed at \$2,642 to exclude charges unrelated to the reversal of Factor Xa anticoagulation. The applicant also considered an alternative scenario in which charges associated with pharmacy indicator 5 (PI5) were removed from the costs of potential cases that included this indicator in the MedPAR data. On average, charges removed from the costs of potential cases utilizing generic coagulation factors were much lower than the total pharmacy charges.

The applicant noted that, in all 12 scenarios, the average case-weighted standardized charge per case for potential cases representing patients who may be eligible for treatment using AndexXa™ would exceed the average case-weighted threshold amounts in Table 10 of the FY 2018 IPPS/LTCH PPS final rule by more than \$855.

The applicant's order of operations used for each analysis is as follows:

(1) removing 60 percent or 40 percent of blood and blood product administration charges and up to 100 percent of pharmacy charges for PI5 or FEIBA from the average case-weighted unstandardized charge per case; and (2) standardizing the charges per cases using the Impact File published with the FY 2015 IPPS/LTCH PPS final rule. After removing the charges for the prior technology and standardizing charges, the applicant applied an inflation factor of 1.154181, which is a combination of 9.8446 percent, the

value used in the FY 2017 IPPS final rule as the 2-year outlier threshold inflation factor, and 5.074 percent, the value used in the FY 2018 IPPS final rule as the 1-year outlier threshold inflation factor, to update the charges from FY 2015 to FY 2018. The applicant did not add charges for AndexXa™ as the price had not been set at the time of conducting this analysis. Under each scenario, the applicant stated that the inflated average case-weighted standardized charge per case exceeded the average case-weighted threshold amount (based on the FY 2018 IPPS Table 10 thresholds). Below we provide a table for all 12 scenarios that the applicant indicated demonstrate that the technology meets the cost criterion.

Scenario	Inflated Average Standardized Case-Weighted Charge Per Case	Average Case-Weighted Threshold Amount
100 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$71,305	\$60,209
100 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$73,108	\$60,209
100 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$72,172	\$60,209
100 Percent of Cases, PI5, 40 Percent Removal of Blood and Blood Product Administration Costs	\$73,740	\$60,209
80 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$68,400	\$58,817
80 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$70,184	\$58,817
80 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$69,279	\$58,817
80 Percent of Cases, PI5, 40 Percent Removal of Blood and Blood Product Administration Costs	\$70,826	\$58,817
25 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$46,127	\$45,272
25 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$47,730	\$45,272
25 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$47,089	\$45,272
25 Percent of Cases, PI5, 40 Percent Removal of Blood and	\$48,403	\$45,272

Scenario	Inflated Average Standardized Case-Weighted Charge Per Case	Average Case-Weighted Threshold Amount
Blood Product Administration Costs		

We invited public comments on whether AndexXa™ meets the cost criterion.

Comment: The applicant reiterated that it believed AndexXa™ meets the cost criterion. The applicant noted that in all 12 scenarios submitted with the cost analysis of the application for AndexXa™ in October 2017, the average case-weighted standardized charges per case exceeded the average case-weighted threshold amounts in the FY 2018 Table 10 by an average of \$8,431. The applicant further noted that, because the price of AndexXa™ had not been set at the time of conducting the analysis, it did not incorporate charges for the new technology in its application. Therefore, the applicant conducted and submitted an updated analysis that added charges for the costs of AndexXa™ as well as updated the charges related to administering AndexXa™ in response to an increase in payment rates for procedural terminology codes 96365 and 96366 for infusion administration.

The applicant indicated that the WAC for 1 gram of AndexXa™ is \$28,125, and the prescribing information outlines a low-dose and a high-dose regimen. The applicant explained that, in calculating the charges for AndexXa™, the low-dose regimen was assumed for all scenarios. The applicant stated that the low-dose regimen consists of an initial IV bolus and a follow-on IV infusion. The applicant further stated that during the initial IV bolus, the patient is infused with 400 mg of AndexXa™ at the target rate of 30

mg per minute, and during the follow-on IV infusion, the patient is infused with 4 mg of AndexXa™, per minute, for 120 minutes. The applicant noted that, for purposes of simplification and consistency, the follow-on IV infusion was assumed to be the full 120 minutes for all 12 scenarios. Applying the assumptions for dosing regime and duration of follow-on IV infusion, the applicant stated that a patient receiving a low-dose regimen is administered a total of 880 mg—88 percent of 1 gram—of AndexXa™. The applicant calculated that the low-dose regime equates to a WAC of \$24,750 per patient. The applicant converted the low-dose treatment cost of \$24,750 to a charge using a cost to CCR of 0.5.

The applicant indicated that the addition of charges for AndexXa™ and the updated charges related to AndexXa™ administration increased the difference between the average case-weighted standardized charges per case and the average case-weighted threshold amount in Table 10 from an average of \$8,431 to an average of \$57,932, or by a 587 percent increase. Below we provide a table for all 12 revised scenarios of the cost analysis conducted by the applicant to demonstrate that the technology meets the cost criterion.

Scenario	Inflated Average Standardized Case-Weighted Charge Per Case	Average Case-Weighted Threshold Amount
100 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$120,817	\$60,209
100 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$122,619	\$60,209
100 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$121,683	\$60,209

Scenario	Inflated Average Standardized Case-Weighted Charge Per Case	Average Case-Weighted Threshold Amount
100 Percent of Cases, PI5, 40 Percent Removal of Blood and Blood Product Administration Costs	\$123,252	\$60,209
80 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$117,911	\$58,817
80 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$119,696	\$58,817
80 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$118,790	\$58,817
80 Percent of Cases, PI5, 40 Percent Removal of Blood and Blood Product Administration Costs	\$120,338	\$58,817
25 Percent of Cases, FEIBA, 60 Percent Removal of Blood and Blood Product Administration Costs	\$95,638	\$45,272
25 Percent of Cases, PI5, 60 Percent Removal of Blood and Blood Product Administration Costs	\$97,242	\$45,272
25 Percent of Cases, FEIBA, 40 Percent Removal of Blood and Blood Product Administration Costs	\$96,600	\$45,272
25 Percent of Cases, PI5, 40 Percent Removal of Blood and Blood Product Administration Costs	\$97,914	\$45,272

Response: After consideration of the public comments we received, we agree that AndexXa™ meets the cost criterion.

With regard to the substantial clinical improvement criterion, the applicant asserted that AndexXa™ represents a substantial clinical improvement for the treatment of patients who are receiving apixaban or rivaroxaban who experience serious, uncontrolled bleeding events or who require emergency surgery because the technology addresses an unmet medical need for an antidote to apixaban and rivaroxaban. According to the applicant, AndexXa™ is the only FDA-approved agent shown in prospective clinical trials to rapidly (within 2 to 5 minutes) and sustainably reverse the

anticoagulation activity of these Factor Xa inhibitors; is potentially nonthrombogenic, as no serious adverse effects of thrombosis were observed in clinical trials; and could supplant currently available treatments for bleeding from anti-Factor Xa therapy, which have not been shown to be effective in the treatment of all patients.

The applicant stated that the use of any anticoagulant is associated with an increased risk of bleeding, and bleeding complications can be life-threatening. The applicant further indicated that bleeding is especially concerning for patients treated with these Factor Xa inhibitors because, prior to the FDA approval of AndexXa™, no antidotes to these Factor Xa inhibitors were available. As a result, when a patient anticoagulated with the use of apixaban or rivaroxaban presented with life-threatening bleeding, clinicians often resorted to using preparations of vitamin K dependent clotting factors, such as 4-factor prothrombin complex concentrates (PCCs), which do not reverse the effects of these Factor Xa inhibitors' anticoagulation. The applicant asserted that despite the lack of any large, prospective, randomized study examining the efficacy and safety of these agents in this patient population, administration of 4-factor PCCs as a means to “reverse” the anticoagulant effect of these Factor Xa inhibitors is commonplace in many hospitals due to the lack of any alternative in the setting of a serious or life-threatening bleed.

As noted above, AndexXa™ has a unique mechanism of action and represents a new biological approach to the treatment of patients receiving apixaban or rivaroxaban who have been diagnosed with acute severe bleeding who require immediate reversal of the Factor Xa inhibitor therapy. The applicant explained that although AndexXa™ is

structurally very similar to native Factor Xa inhibitors, the technology has undergone several modifications that restrict its biological activity to reversing the effects of Factor Xa inhibitors by binding with and sequestering direct Factor Xa inhibitors, which allows native Factor Xa inhibitors to dictate the normal coagulation and hemostasis process. As a result, the applicant maintained that AndexXa™ represents a safe and effective therapy for the management of severe bleeding in a fragile patient population and a substantial clinical improvement over existing technologies and reversal strategies.

The applicant noted the following: (1) on average, patients with a bleeding complication were hospitalized for 6.3 to 8.5 days, and (2) the most common therapies currently used to manage severe bleeding events in patients undergoing anticoagulant treatment are blood and blood product transfusions, most frequently with packed red blood cells (RBC) or fresh frozen plasma (FFP).<sup>213</sup> According to the applicant, the blood products that are currently being employed as reversal agents carry significant risks. For instance, no clinical studies have evaluated the safety and efficacy of FFP transfusions to treat bleeding associated with Factor Xa inhibitors.<sup>214,215</sup> Furthermore, transfusions with packed RBCs carry a risk (1 to 4 per 50,000 transfusions) of acute hemolytic reactions, in which the recipient's antibodies attack the transfused red blood cells, which is associated with clinically significant anemia, kidney failure, and death.<sup>216</sup> The applicant asserted

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<sup>213</sup> Truven, "2016 Truven Medicare Projected Bleeding Events", MARKETSCAN® Medicare Supplemental Database, January 1, 2016 to December 31, 2016 Data pull, Data on File, Supplemental file.

<sup>214</sup> Siegal, D.M., "Managing target-specific oral anticoagulant associated bleeding including an update on pharmacological reversal agents," *J Thromb Thrombolysis*, 2015 Apr, vol. 39(3), pp. 395-402.

<sup>215</sup> Kalus, J.S., "Pharmacologic interventions for reversing the effects of oral anticoagulants," *Am J Health Syst Pharm*, 2013, vol. 70(10 Suppl 1), pp. S12-21.

<sup>216</sup> Sharma, S., Sharma, P., Tyler, L.N., "Transfusion of Blood and Blood Products: Indications and Complications," *Am Fam Physician*, 2011, vol. 83(6), pp. 719-24.

that a RBC transfusion in trauma patients with major bleeding is associated with an increased risk of nonfatal vascular events and death.<sup>217</sup> The applicant noted that, although patients who are treated with AndexXa™ would receive RBC transfusions if their hemoglobin is low enough to warrant it, AndexXa™ reduces the need for RBC transfusion.

The applicant asserted that laboratory studies have failed to provide consistent evidence of “reversal” of the anticoagulant effect of Factor Xa inhibitors across a range of different PCC products and concentrations. Results of thrombin generation assays have varied depending on the format of the assay. Despite years of experience with low molecular weight heparins and pentasaccharide anticoagulants, neither PCCs nor factor eight inhibitor bypassing activity are recognized as safe and effective reversal agents for these Factor Xa inhibitors.<sup>218</sup> Unlike patients taking vitamin K antagonists, patients receiving treatment with oral Factor Xa inhibitor drugs have normal levels of clotting factors. Therefore, a strategy based on “repleting” factor levels is of uncertain foundation and could result in supra-normal levels of coagulation factors after rapid metabolism and clearance of the oral anticoagulant.<sup>219</sup>

The applicant provided results from two randomized, double-blind, placebo-controlled Phase III studies,<sup>220,221</sup> the ANNEXA-A (reversal of apixaban) and

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<sup>217</sup> Perel, P., Clayton, T., Altman, D.G., et. al., “Red blood cell transfusion and mortality in trauma patients: risk-stratified analysis of an observational study,” *PLoS Med*, 2014, vol. 11(6), pp. e1001664.

<sup>218</sup> Sarich, T.C., Seltzer, J.H., Berkowitz, S.D., et al., “Novel oral anticoagulants and reversal agents: Considerations for clinical development,” *Am Heart J*, 2015, vol. 169(6), pp. 751-7.

<sup>219</sup> Siegal, D.M., “Managing target-specific oral anticoagulant associated bleeding including an update on pharmacological reversal agents,” *J Thromb Thrombolysis*, 2015 Apr, vol. 39(3), pp. 395-402.

<sup>220</sup> Connors, J.M., “Antidote for Factor Xa Anticoagulants,” *N Engl J Med*, 2015 Nov 13.

ANNEXA-R (reversal of rivaroxaban) trials. The primary endpoint in both these studies was the percent change in anti-Factor Xa activity. Secondary endpoints included proportion of participants with an 80 percent or greater reduction in anti-Factor Xa activity, change in unbound Factor Xa inhibitor concentration, and change in endogenous thrombin potential (ETP). A total of 145 participants were enrolled in the studies, with 101 participants randomized to AndexXa™ and 44 participants randomized to placebo. The mean age of participants was 58 years old, and 39 percent were women. There was a mean of greater than 90 percent reduction in anti-Factor Xa activity in both parts of both studies in subjects receiving AndexXa™. The studies also demonstrated the following: (1) rapid and sustainable reversal of anticoagulation; (2) reduced Factor Xa inhibitor free plasma levels by at least 80 percent below a calculated no-effect level; and (3) reduced anti-Factor Xa activity to the lowest level of detection within 2 to 5 minutes of infusion. The applicant noted that decreased Factor Xa inhibitor levels have been shown to correspond to decreased bleeding complications, reconstitution of activity of coagulation factors, and correction of coagulation.<sup>222,223,224</sup>

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<sup>221</sup> Siegal, D.M., Curnutte, J.T., Connolly, S.J., et al., “Andexanet Alfa for the Reversal of Factor Xa Inhibitor Activity,” *N Engl J Med*, 2015 Nov 11.

<sup>222</sup> Lu, G., DeGuzman, F., Hollenbach, S., et al., “Reversal of low molecular weight heparin and fondaparinux by a recombinant antidote,” (r-Antidote, PRT064445), *Circulation*, 2010, vol. 122, pp. A12420.

<sup>223</sup> Rose, M., Beasley, B., “Apixaban clinical review addendum,” Silver Spring, MD: Center for Drug Evaluation and Research, 2012. Available at: [http://www.accessdata.fda.gov/drugsatfda\\_docs/nda/2012/202155Orig1s000MedR.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/nda/2012/202155Orig1s000MedR.pdf).

<sup>224</sup> Beasley, N., Dunnmon, P., Rose, M., “Rivaroxaban clinical review: FDA draft briefing document for the Cardiovascular and Renal Drugs Advisory Committee,” 2011. Available at: <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/drugs/CardiovascularandRenalDrugsAdvisoryCommittee/ucm270796.pdf>.

The applicant stated that the results from the two Phase III studies and previous proof-of-concept Phase II dose-finding studies showed that use of AndexXa™ can rapidly reverse anticoagulation activity of Factor Xa inhibitors and sustain that reversal. Therefore, the applicant asserted that the use of AndexXa™ has the potential to successfully treat patients who only need short-duration reversal of the Factor Xa inhibitor anticoagulant, as well as patients who require longer duration reversal, such as patients experiencing a severe intracranial hemorrhage or requiring emergency surgery. Furthermore, the applicant noted that its technology's duration of action allows for a gradual return of Factor Xa inhibitor concentrations to placebo control levels within 2 hours following the end of infusion.

With regard to AndexXa™'s nonthrombogenic nature, the applicant provided clinical trial data which revealed participants in Phase II and Phase III trials had no thrombotic events and there were no serious or severe adverse events reported. Results also showed that use of AndexXa™ has a much lower risk of thrombosis than typical procoagulants because the technology lacks the region responsible for inducing coagulation. Furthermore, the applicant asserted that the use of AndexXa™ is not associated with the known complications seen with RBC transfusions. The applicant asserted that, while the Phase II and Phase III trials and studies measured physiological hallmarks of reversal of NOACs, it is expected that the availability of a safe and reliable Factor Xa reversal will result in an overall better prognosis for patients—potentially leading to a reduction in length of hospital stay, fewer complications, and decreased mortality associated with unexpected bleeding episodes.

The applicant also stated that use of AndexXa<sup>™</sup> can supplant currently available treatments used for reversing severe bleeding from anti-Factor Xa therapy, which have not been shown to be effective in the treatment of all patients. With regard to PCCs and FFPs, the applicant stated that there is a lack of clinical evidence available for patients taking Factor Xa inhibitors that experience severe bleeding events. The applicant noted that the case reports provide a snapshot of emergent treatment of these often medically complex anti-Factor Xa-treated patients with major bleeds. However, the applicant stated that these analyses reveal the inconsistent approach in assessing the degree of anticoagulation in the patient and the variability in treatment strategy. The applicant explained that little or no assessment of efficacy in restoring coagulation in the patients was performed, and the major outcomes measures were bleeding cessation or mortality. The applicant concluded that overall, there is very little evidence for the efficacy suggested in some guidelines, and the evidence is insufficient to draw any conclusions.

The applicant submitted interim data purporting to show substantial clinical improvement within its target patient population as part of an ongoing Phase IIIb/IV open-label ANNEXA-4 study. The ANNEXA-4 study is a multi-center, prospective, open-label, single group study that evaluated 67 patients who had acute, major bleeding within 18 hours of receipt of a Factor Xa inhibitor (32 patients receiving rivarobaxan, 31 receiving apixaban, and 4 receiving enoxaparin). The population in the study was reflective of a real-world population, with mean age of 77 years old, most patients with cardiovascular disease, and the majority of bleeds being intracranial or gastrointestinal. According to the applicant, the results of the ANNEXA-4 study demonstrate safe,

reliable, and rapid reversal of Factor Xa levels in patients experiencing acute bleeding and are consistent with the results seen in the Phase II and Phase III trials, based on interim data. However, in the proposed rule, we stated we were concerned that this interim data also indicate 18 percent of patients experienced a thrombotic event and 15 percent of patients died following reversal during the 30-day follow-up period in the ANNEXA-4 study. For this reason, we stated we were concerned that there is insufficient data to determine substantial clinical improvement over existing technologies.

We invited public comments on whether AndexXa™ meets the substantial clinical improvement criterion.

Comment: The applicant reiterated that AndexXa™ satisfies the substantial clinical improvement criterion, and indicated that it is the first and only FDA-approved antidote for the direct Factor Xa inhibitors apixaban and rivaroxaban. The applicant stated that AndexXa™ has been shown to reverse the anticoagulant effect of apixaban and rivaroxaban immediately in patients needing rapid reversal of anticoagulation in emergency situations. The applicant referenced the results from 2 ANNEXA Phase III clinical trials that show that the reversal of anticoagulation activity with AndexXa™ occurred within 2 to 5 minutes in more than 90 percent of patients treated with apixaban and rivaroxaban to demonstrate its substantial clinical improvement over existing technologies.<sup>225</sup> The applicant also pointed out that, as shown by the clinical results, AndexXa™ rapidly reversed anti-Factor Xa activity in the ANNEXA-4 clinical trial and

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<sup>225</sup> Siegal DM, Curnutte JT, Connolly SJ et al. Andexanet Alfa for the Reversal of Factor Xa Inhibitor Activity. N Engl J Med. 2015; 373:2413-2424.

sustained that reversal for enrolled patients for 12 hours.<sup>226,227,228</sup> Several commenters suggested that these results showed AndexXa™ has the potential to successfully treat patients who only require short-duration reversal of the Factor Xa inhibitor anticoagulant, as well as patients who may need longer duration reversal. Furthermore, the applicant and other commenters stated that ongoing trials in which enrolled patients experienced uncontrolled bleeding while receiving apixaban and rivaroxaban have confirmed the safety and efficacy of the use of AndexXa™ in this patient population.

With respect to the 18 percent of patients that experienced a thrombotic event and 15 percent of patients that died following reversal during the 30-day follow-up period in the ongoing ANNEXA-4 trial, the applicant asserted that this is consistent with the high-risk profile of the patients who have an intrinsic risk of dying even if bleeding is reversed. Specifically, the applicant explained that the thrombotic event rate and mortality observed in the ANNEXA-4 study, to date, are a reflection of the patients taking Factor Xa inhibitors due to a prior history of venous thromboembolisms, and reversal of anticoagulation in bleeding patients by use of AndexXa™ exposes the underlying disease risk, which can result in thrombotic events. The applicant further noted that, in an expanded cohort of 227 patients, the total mortality rate was 12 percent and thrombotic events occurred within 3 days of AndexXa™ administration in only 2.6 percent of patients, and within 30 days in 11 percent of patients. The applicant also stated that other approved reversal agents have had a similar safety profile. For example,

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<sup>226</sup> Ibid.

<sup>227</sup> Connolly SJ, Milling TJ, Eikelboom JW et al. Andexanet Alfa for Acute Major Bleeding Associated with Factor Xa Inhibitors. *N Engl J Med* 2016;375:1131-41.

<sup>228</sup> Ibid.

in the REVERSE-AD study for the reversal agent idarucizumab, the results indicated that use of the technology had a total mortality rate of 14 percent after reversal of anticoagulation, and the thrombotic event rates in patients not anticoagulated are roughly similar at approximately 10 to 15 percent for both REVERSE-AD and ANNEXA-4. Furthermore, the applicant stated that when comparing the results of the expanded ANNEXA-4 cohort with the results of 16 contemporary studies enrolling 30 or more patients who experienced acute major bleeding, the majority of studies indicated a thrombotic event rate of approximately 10 percent, though rates as high as 25 to 28 percent have been reported. The applicant indicated that, while several studies have lower thrombotic event rates compared with the ANNEXA-4 group, they also tended to enroll younger patients in the populations and patients with less severe bleeding events. The applicant noted that the median time to a thrombotic event ranged from as few as 1 to 2 days to as many as 8 days, with overall follow-up generally ranging from 30 to 90 days. In contrast, the applicant stated that the median time to a thrombotic event in ANNEXA-4 was 11 days.

Several commenters also supported the clinical results as demonstration of substantial clinical improvement for AndexXa™ over existing technologies. A commenter stated that the lack of a targeted antidote to Factor Xa anticoagulation is a significant unmet need and one that has been an impediment to the use of Factor Xa inhibitors such as apixaban and rivaroxaban, despite their use convenience. Other commenters believed that a serious risk inherent to Factor Xa treatment is the incidence of unanticipated bleeding, which may occur as a result of trauma or bleeding into a

critical organ. Several commenters expressed concern with the high risk of death or major morbidity as a result of such bleeding, particularly in the case of an intracranial hemorrhage, which is not amenable to emergency invasive interventions to stop the bleeding; an issue these commenters believed could be resolved with the use of AndexXa™. The commenters stated that, for patients with intracranial hemorrhages that are anticoagulation-related, there are effective reversal treatments when the anticoagulation is induced by warfarin, heparin or a direct thrombin inhibitor, but none when the critical bleeding is related to a Factor Xa inhibitor such as apixaban or rivaroxaban. Therefore, the commenters believed that the approval of new technology add-on payments for AndexXa™ offers an effective treatment option for patients receiving apixaban or rivaroxaban who experience a critical bleed and require urgent reversal of the anticoagulant effect. The commenters further stated that, as the only existing Factor Xa inhibitor reversal agent for apixaban and rivaroxaban, AndexXa™ is a needed therapy in managing these critical scenarios. The commenters believed that, based on these reasons, AndexXa™ meets the substantial clinical improvement criterion.

Response: We appreciate the commenters' and the applicant's input regarding the substantial clinical improvement criterion for AndexXa™. We agree that AndexXa™ represents a substantial clinical improvement over existing technologies and provides an alternative treatment option to Medicare beneficiaries and, therefore, meets the substantial clinical improvement criterion. Specifically, AndexXa™: (1) provides a rapid, sustained reversal of the anticoagulant effects of Factor Xa inhibitors rivaroxaban and apixaban; and (2) represents a treatment option for patients who experience severe or

life-threatening bleeds, such as intracranial hemorrhages, during the administration of Factor Xa inhibitor anticoagulation. As noted above, according to the FDA-approved prescribing information, AndexXa™ has not been shown to be effective for, and is not indicated for, the treatment of bleeding related to any Factor Xa inhibitors other than apixaban and rivaroxaban.

After consideration of the public comments we received, we have determined that AndexXa™ meets all of the criteria for approval for new technology add-on payments. Therefore, we are approving new technology add-on payments for AndexXa™ for FY 2019. Cases involving the use of AndexXa™ that are eligible for new technology add-on payments will be identified by ICD-10-PCS procedure codes XW03372 and XW04372. The applicant explained that the WAC for 1 vial costs \$2,750 with the use of an average of 10 vials for the low dose and 18 vials for the high dose. The applicant also noted that per the clinical trial data, 90 percent of cases were administered a low dose and 10 percent of cases the high dose. The weighted average between the low and high dose is an average of 10.22727 vials. Therefore, the cost of a standard dosage of AndexXa™ is \$28,125 ( $\$2,750 \times 10.22727$ ). Under § 412.88(a)(2), we limit new technology add-on payments to the lesser of 50 percent of the average cost of the technology or 50 percent of the costs in excess of the MS-DRG payment for the case. As a result, the maximum new technology add-on payment for a case involving the use of AndexXa™ is \$14,062.50 for FY 2019.

### **III. Changes to the Hospital Wage Index for Acute Care Hospitals**

#### **A. Background**

##### **1. Legislative Authority**

Section 1886(d)(3)(E) of the Act requires that, as part of the methodology for determining prospective payments to hospitals, the Secretary adjust the standardized amounts for area differences in hospital wage levels by a factor (established by the Secretary) reflecting the relative hospital wage level in the geographic area of the hospital compared to the national average hospital wage level. We currently define hospital labor market areas based on the delineations of statistical areas established by the Office of Management and Budget (OMB). A discussion of the FY 2019 hospital wage index based on the statistical areas appears under section III.A.2. of the preamble of this final rule.

Section 1886(d)(3)(E) of the Act requires the Secretary to update the wage index annually and to base the update on a survey of wages and wage-related costs of short-term, acute care hospitals. (CMS collects these data on the Medicare cost report, CMS Form 2552-10, Worksheet S-3, Parts II, III, and IV. The OMB control number for approved collection of this information is 0938-0050.) This provision also requires that any updates or adjustments to the wage index be made in a manner that ensures that aggregate payments to hospitals are not affected by the change in the wage index. The adjustment for FY 2019 is discussed in section II.B. of the Addendum to this final rule.

As discussed in section III.I. of the preamble of this final rule, we also take into account the geographic reclassification of hospitals in accordance with

sections 1886(d)(8)(B) and 1886(d)(10) of the Act when calculating IPPS payment amounts. Under section 1886(d)(8)(D) of the Act, the Secretary is required to adjust the standardized amounts so as to ensure that aggregate payments under the IPPS after implementation of the provisions of sections 1886(d)(8)(B), 1886(d)(8)(C), and 1886(d)(10) of the Act are equal to the aggregate prospective payments that would have been made absent these provisions. The budget neutrality adjustment for FY 2019 is discussed in section II.A.4.b. of the Addendum to this final rule.

Section 1886(d)(3)(E) of the Act also provides for the collection of data every 3 years on the occupational mix of employees for short-term, acute care hospitals participating in the Medicare program, in order to construct an occupational mix adjustment to the wage index. A discussion of the occupational mix adjustment that we are applying to the FY 2019 wage index appears under sections III.E.3. and F. of the preamble of this final rule.

## 2. Core-Based Statistical Areas (CBSAs) for the FY 2019 Hospital Wage Index

The wage index is calculated and assigned to hospitals on the basis of the labor market area in which the hospital is located. Under section 1886(d)(3)(E) of the Act, beginning with FY 2005, we delineate hospital labor market areas based on OMB-established Core-Based Statistical Areas (CBSAs). The current statistical areas (which were implemented beginning with FY 2015) are based on revised OMB delineations issued on February 28, 2013, in OMB Bulletin No. 13-01. OMB Bulletin No. 13-01 established revised delineations for Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas in the United States and

Puerto Rico based on the 2010 Census, and provided guidance on the use of the delineations of these statistical areas using standards published on June 28, 2010 in the **Federal Register** (75 FR 37246 through 37252). We refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 49951 through 49963) for a full discussion of our implementation of the OMB labor market area delineations beginning with the FY 2015 wage index.

Generally, OMB issues major revisions to statistical areas every 10 years, based on the results of the decennial census. However, OMB occasionally issues minor updates and revisions to statistical areas in the years between the decennial censuses through OMB Bulletins. On July 15, 2015, OMB issued OMB Bulletin No. 15-01, which provided updates to and superseded OMB Bulletin No. 13-01 that was issued on February 28, 2013. The attachment to OMB Bulletin No. 15-01 provided detailed information on the update to statistical areas since February 28, 2013. The updates provided in OMB Bulletin No. 15-01 were based on the application of the 2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas to Census Bureau population estimates for July 1, 2012 and July 1, 2013. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56913), we adopted the updates set forth in OMB Bulletin No. 15-01 effective October 1, 2016, beginning with the FY 2017 wage index. For a complete discussion of the adoption of the updates set forth in OMB Bulletin No. 15-01, we refer readers to the FY 2017 IPPS/LTCH PPS final rule. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38130), we continued to use the OMB delineations that were adopted beginning with FY 2015 to calculate the area wage

indexes, with updates as reflected in OMB Bulletin No. 15-01 specified in the FY 2017 IPPS/LTCH PPS final rule.

On August 15, 2017, OMB issued OMB Bulletin No. 17-01, which provided updates to and superseded OMB Bulletin No. 15-01 that was issued on July 15, 2015. The attachments to OMB Bulletin No. 17-01 provide detailed information on the update to statistical areas since July 15, 2015, and are based on the application of the 2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas to Census Bureau population estimates for July 1, 2014 and July 1, 2015. In OMB Bulletin No. 17-01, OMB announced that one Micropolitan Statistical Area now qualifies as a Metropolitan Statistical Area. The new urban CBSA is as follows:

- Twin Falls, Idaho (CBSA 46300). This CBSA is comprised of the principal city of Twin Falls, Idaho in Jerome County, Idaho and Twin Falls County, Idaho.

The OMB bulletin is available on the OMB Web site at

<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/bulletins/2017/b-17-01.pdf>.

We noted in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20354) that we did not have sufficient time to include this change in the computation of the proposed FY 2019 wage index, ratesetting, and Tables 2 and 3 associated with the FY 2019 IPPS/LTCH PPS proposed rule. We stated in the proposed rule (83 FR 20354) that this new CBSA may affect the budget neutrality factors and wage indexes, depending on whether the area is eligible for the rural floor and the impact of the overall payments of the hospital located in this new CBSA. In the proposed rule, we provided an estimate of this new area's wage index based on the average hourly wages for new CBSA 46300 and the national average

hourly wages from the wage data for the proposed FY 2019 wage index (described in section III.B. of the preamble of the proposed rule). Currently, provider 130002 is the only hospital located in Twin Falls County, Idaho, and there are no hospitals located in Jerome County, Idaho. Thus, the proposed wage index for CBSA 46300 was calculated using the average hourly wage data for one provider (provider 130002).

In sections III.D. and E.2. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, we provided the proposed FY 2019 unadjusted and occupational mix adjusted national average hourly wages. Taking the estimated average hourly wage of new CBSA 46300 and dividing by the proposed national average hourly wage resulted in the estimated wage indexes shown in the table in the proposed rule (83 FR 20354), which is also provided below.

	<b>Estimated Unadjusted Wage Index for New CBSA 46300</b>	<b>Estimated Occupational Mix Adjusted Wage Index for New CBSA 46300</b>
Proposed National Average Hourly Wage	42.990625267	42.948428861
Estimated CBSA Average Hourly Wage	35.833564813	38.127590025
Estimated Wage Index	0.8335	0.8878

For FY 2019, we are using the OMB delineations that were adopted beginning with FY 2015 to calculate the area wage indexes, with updates as reflected in OMB Bulletin Nos. 13-01, 15-01, and 17-01. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20354), we stated that, in the final rule, we would incorporate this change into the final FY 2019 wage index, ratesetting, and tables. We did not receive any public

comments regarding this policy area. Therefore, we have incorporated the updates as reflected in OMB Bulletin Nos. 13-01, 15-01, and 17-01 into the final FY 2019 wage index, ratesetting, and tables for this final FY2019 rule.

### 3. Codes for Constituent Counties in CBSAs

CBSAs are made up of one or more constituent counties. Each CBSA and constituent county has its own unique identifying codes. There are two different lists of codes associated with counties: Social Security Administration (SSA) codes and Federal Information Processing Standard (FIPS) codes. Historically, CMS has listed and used SSA and FIPS county codes to identify and crosswalk counties to CBSA codes for purposes of the hospital wage index. As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38129 through 38130), we have learned that SSA county codes are no longer being maintained and updated. However, the FIPS codes continue to be maintained by the U.S. Census Bureau. We believe that using the latest FIPS codes will allow us to maintain a more accurate and up-to-date payment system that reflects the reality of population shifts and labor market conditions.

The Census Bureau's most current statistical area information is derived from ongoing census data received since 2010; the most recent data are from 2015. The Census Bureau maintains a complete list of changes to counties or county equivalent entities on the website at: <https://www.census.gov/geo/reference/county-changes.html>. We believe that it is important to use the latest counties or county equivalent entities in order to properly crosswalk hospitals from a county to a CBSA for purposes of the hospital wage index used under the IPPS.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38129 through 38130) we adopted a policy to discontinue the use of the SSA county codes and began using only the FIPS county codes for purposes of crosswalking counties to CBSAs. In addition, in the same rule, we implemented the latest FIPS code updates which were effective October 1, 2017, beginning with the FY 2018 wage indexes. The updated changes were used to calculate the wage indexes in a manner generally consistent with the CBSA-based methodologies finalized in the FY 2005 IPPS final rule and the FY 2015 IPPS/LTCH PPS final rule.

For FY 2019, we are continuing to use only the FIPS county codes for purposes of crosswalking counties to CBSAs. For FY 2019, Tables 2 and 3 associated with this final rule and the County to CBSA Crosswalk File and Urban CBSAs and Constituent Counties for Acute Care Hospitals File posted on the CMS website reflect these county changes.

#### B. Worksheet S-3 Wage Data for the FY 2019 Wage Index

The FY 2019 wage index values are based on the data collected from the Medicare cost reports submitted by hospitals for cost reporting periods beginning in FY 2015 (the FY 2018 wage indexes were based on data from cost reporting periods beginning during FY 2014).

##### 1. Included Categories of Costs

The FY 2019 wage index includes all of the following categories of data associated with costs paid under the IPPS (as well as outpatient costs):

- Salaries and hours from short-term, acute care hospitals (including paid lunch hours and hours associated with military leave and jury duty);
- Home office costs and hours;
- Certain contract labor costs and hours, which include direct patient care, certain top management, pharmacy, laboratory, and nonteaching physician Part A services, and certain contract indirect patient care services (as discussed in the FY 2008 final rule with comment period (72 FR 47315 through 47317)); and
- Wage-related costs, including pension costs (based on policies adopted in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51586 through 51590)) and other deferred compensation costs.

## 2. Excluded Categories of Costs

Consistent with the wage index methodology for FY 2018, the wage index for FY 2019 also excludes the direct and overhead salaries and hours for services not subject to IPPS payment, such as skilled nursing facility (SNF) services, home health services, costs related to GME (teaching physicians and residents) and certified registered nurse anesthetists (CRNAs), and other subprovider components that are not paid under the IPPS. The FY 2019 wage index also excludes the salaries, hours, and wage-related costs of hospital-based rural health clinics (RHCs), and Federally qualified health centers (FQHCs) because Medicare pays for these costs outside of the IPPS (68 FR 45395). In addition, salaries, hours, and wage-related costs of CAHs are excluded from the wage index for the reasons explained in the FY 2004 IPPS final rule (68 FR 45397 through 45398).

### 3. Use of Wage Index Data by Suppliers and Providers Other Than Acute Care Hospitals under the IPPS

Data collected for the IPPS wage index also are currently used to calculate wage indexes applicable to suppliers and other providers, such as SNFs, home health agencies (HHAs), ambulatory surgical centers (ASCs), and hospices. In addition, they are used for prospective payments to IRFs, IPFs, and LTCHs, and for hospital outpatient services.

We note that, in the IPPS rules, we do not address comments pertaining to the wage indexes of any supplier or provider except IPPS providers and LTCHs. Such comments should be made in response to separate proposed rules for those suppliers and providers.

#### C. Verification of Worksheet S-3 Wage Data

The wage data for the FY 2019 wage index were obtained from Worksheet S-3, Parts II and III of the Medicare cost report (Form CMS-2552-10, OMB Control Number 0938-0050) for cost reporting periods beginning on or after October 1, 2014, and before October 1, 2015. For wage index purposes, we refer to cost reports during this period as the “FY 2015 cost report,” the “FY 2015 wage data,” or the “FY 2015 data.” Instructions for completing the wage index sections of Worksheet S-3 are included in the Provider Reimbursement Manual (PRM), Part 2 (Pub. No. 15-2), Chapter 40, Sections 4005.2 through 4005.4. The data file used to construct the FY 2019 wage index includes FY 2015 data submitted to us as of June 20, 2018. As in past years, we performed an extensive review of the wage data, mostly through the use of edits designed to identify aberrant data.

We asked our MACs to revise or verify data elements that result in specific edit failures. For the proposed FY 2019 wage index, we identified and excluded 80 providers with aberrant data that should not be included in the wage index, although we stated in the FY 2019 IPPS/LTCH PPS proposed rule that if data elements for some of these providers are corrected, we intend to include data from those providers in the final FY 2019 wage index (83 FR 20355). We also adjusted certain aberrant data and included these data in the proposed wage index. For example, in situations where a hospital did not have documentable salaries, wages, and hours for housekeeping and dietary services, we imputed estimates, in accordance with policies established in the FY 2015 IPPS/LTCH PPS final rule (79 FR 49965 through 49967). We instructed MACs to complete their data verification of questionable data elements and to transmit any changes to the wage data no later than March 23, 2018. In addition, as a result of the April and May appeals processes, and posting of the April 27, 2018 PUF, we have made additional revisions to the FY 2019 wage data, as described further below. The revised data are reflected in this FY 2019 IPPS/LTCH PPS final rule.

In constructing the proposed FY 2019 wage index, we included the wage data for facilities that were IPPS hospitals in FY 2015, inclusive of those facilities that have since terminated their participation in the program as hospitals, as long as those data did not fail any of our edits for reasonableness. We believed that including the wage data for these hospitals is, in general, appropriate to reflect the economic conditions in the various labor market areas during the relevant past period and to ensure that the current wage index represents the labor market area's current wages as compared to the national

average of wages. However, we excluded the wage data for CAHs as discussed in the FY 2004 IPPS final rule (68 FR 45397 through 45398); that is, any hospital that is designated as a CAH by 7 days prior to the publication of the preliminary wage index public use file (PUF) is excluded from the calculation of the wage index. For the proposed rule, we removed 8 hospitals that converted to CAH status on or after January 23, 2017, the cut-off date for CAH exclusion from the FY 2018 wage index, and through and including January 26, 2018, the cut-off date for CAH exclusion from the FY 2019 wage index. After excluding CAHs and hospitals with aberrant data, we calculated the proposed wage index using the Worksheet S-3, Parts II and III wage data of 3,260 hospitals.

Since the development of the FY 2019 proposed wage index, as a result of further review by the MACs and the April and May appeals processes, we received improved data for 28 hospitals and are including the wage data of these 28 hospitals in the final wage index. However, during our review of the wage data in preparation of the April 27, 2018 PUF, we identified and deleted the data of 2 additional hospitals whose data we determined to be aberrant (unusually low average hourly wages) relative to their CBSAs. With regard to CAHs, we have since learned of 3 additional hospitals that converted to CAH status on or after January 23, 2017, the cut-off date for CAH exclusion from the FY 2018 wage index, and through and including January 26, 2018, the cut-off date for CAH exclusion from the FY 2019 wage index. Accordingly, we have removed 11 hospitals that converted to CAH status from the FY 2019 wage index (8 CAHs for the

proposed rule, and 3 more CAHs for the final rule). The final FY 2019 wage index is based on the wage index of 3,283 hospitals (3,260 + 28 - 2 - 3= 3,283).

For the final FY 2019 wage index, we allotted the wages and hours data for a multicampus hospital among the different labor market areas where its campuses are located in the same manner that we allotted such hospitals’ data in the FY 2018 wage index (82 FR 38131 through 38132); that is, using campus full-time equivalent (FTE) percentages as originally finalized in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51591). Table 2, which contains the final FY 2019 wage index associated with this final rule (available via the Internet on the CMS website), includes separate wage data for the campuses of 16 multicampus hospitals. The following chart lists the multicampus hospitals by CSA certification number (CCN) and the FTE percentages on which the wages and hours of each campus were allotted to their respective labor market areas:

<b>CCN of Multicampus Hospital</b>	<b>Full-Time Equivalent (FTE) Percentages</b>
050121	0.81
05B121	0.19
070022	0.99
07B022	0.01
070033	0.92
07B033	0.08
100029	0.54
10B029	0.46
100167	0.37
10B167	0.63
140010	0.82
14B010	0.18

<b>CCN of Multicampus Hospital</b>	<b>Full-Time Equivalent (FTE) Percentages</b>
220074	0.89
22B074	0.11
330234	0.72
33B234	0.28
360019	0.95
36B019	0.05
360020	0.99
36B020	0.01
390006	0.95
39B006	0.05
390115	0.86
39B115	0.14
390142	0.83
39B142	0.17
460051	0.97
46B051	0.03
510022	0.95
51B022	0.05
670062	0.55
67B062	0.45

We note that, in past years, in Table 2, we have placed a “B” to designate the subordinate campus in the fourth position of the hospital CCN. However, for the FY 2019 proposed rule, this final rule, and future rulemaking, we have moved the “B” to the third position of the CCN. Because all IPPS hospitals have a “0” in the third position of the CCN, we believe that placement of the “B” in this third position, instead of the “0” for the subordinate campus, is the most efficient method of identification and interferes the least with the other, variable, digits in the CCN.

#### D. Method for Computing the FY 2019 Unadjusted Wage Index

In the FY 2019 IPPS/LTCH PPS proposed rule, we indicated we were committed to transforming the health care delivery system, including the Medicare program, by putting an additional focus on patient-centered care and working with providers, physicians, and patients to improve outcomes. One key to that transformation is ensuring that the Medicare payment rates are as accurate and appropriate as possible, consistent with the law. We invited the public to submit comments, suggestions, and recommendations for regulatory and policy changes to address wage index disparities.

CMS looks forward to continuing to work on wage index disparities, particularly for rural hospitals, to the extent permitted under current law and appreciates responses to our request for public input on this issue. By allowing the imputed floor to expire for all urban States, as described section III.G.2. of the preamble of this final rule, CMS has begun the process of making the wage index more equitable.

##### 1. Methodology for FY 2019

The method used to compute the FY 2019 wage index without an occupational mix adjustment follows the same methodology that we used to compute the wage indexes without an occupational mix adjustment since FY 2012 (76 FR 51591 through 51593).

As discussed in the FY 2012 IPPS/LTCH PPS final rule, in “Step 5,” for each hospital, we adjust the total salaries plus wage-related costs to a common period to determine total adjusted salaries plus wage-related costs. To make the wage adjustment, we estimate the percentage change in the employment cost index (ECI) for compensation for each 30-day increment from October 14, 2014, through April 15, 2016, for private

industry hospital workers from the BLS’ *Compensation and Working Conditions*. We have consistently used the ECI as the data source for our wages and salaries and other price proxies in the IPPS market basket, and we did not propose any changes to the usage of the ECI for FY 2019. The factors used to adjust the hospital’s data were based on the midpoint of the cost reporting period, as indicated in the following table.

**MIDPOINT OF COST REPORTING PERIOD**

<b>After</b>	<b>Before</b>	<b>Adjustment Factor</b>
10/14/2014	11/15/2014	1.02567
11/14/2014	12/15/2014	1.02413
12/14/2014	01/15/2015	1.02257
01/14/2015	02/15/2015	1.02100
02/14/2015	03/15/2015	1.01941
03/14/2015	04/15/2015	1.01784
04/14/2015	05/15/2015	1.01627
05/14/2015	06/15/2015	1.01471
06/14/2015	07/15/2015	1.01316
07/14/2015	08/15/2015	1.01161
08/14/2015	09/15/2015	1.01007
09/14/2015	10/15/2015	1.00849
10/14/2015	11/15/2015	1.00685
11/14/2015	12/15/2015	1.00516
12/14/2015	01/15/2016	1.00343
01/14/2016	02/15/2016	1.00171
02/14/2016	03/15/2016	1.00000
03/14/2016	04/15/2016	0.99824

For example, the midpoint of a cost reporting period beginning January 1, 2015, and ending December 31, 2015, is June 30, 2015. An adjustment factor of 1.01316 was applied to the wages of a hospital with such a cost reporting period.

Using the data as previously described, the FY 2019 national average hourly wage (unadjusted for occupational mix) is \$42.997789358.

Previously, we also would provide a Puerto Rico overall average hourly wage. As discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56915), prior to January 1, 2016, Puerto Rico hospitals were paid based on 75 percent of the national standardized amount and 25 percent of the Puerto Rico-specific standardized amount. As a result, we calculated a Puerto Rico-specific wage index that was applied to the labor share of the Puerto Rico-specific standardized amount. Section 601 of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113) amended section 1886(d)(9)(E) of the Act to specify that the payment calculation with respect to operating costs of inpatient hospital services of a subsection (d) Puerto Rico hospital for inpatient hospital discharges on or after January 1, 2016, shall use 100 percent of the national standardized amount. As we stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56915 through 56916), because Puerto Rico hospitals are no longer paid with a Puerto Rico-specific standardized amount as of January 1, 2016, under section 1886(d)(9)(E) of the Act, as amended by section 601 of the Consolidated Appropriations Act, 2016, there is no longer a need to calculate a Puerto Rico-specific average hourly wage and wage index. Hospitals in Puerto Rico are now paid 100 percent of the national standardized amount and, therefore, are subject to the national average hourly wage (unadjusted for occupational mix) (which is \$42.997789358 for this FY 2019 final rule) and the national wage index, which is applied to the national labor share of the national standardized amount. Therefore, for FY 2019, there is no Puerto Rico-specific overall average hourly wage or wage index.

## 2. Update of Policies Related to Other Wage-Related Costs, Clarification of the Calculation of Other Wage-Related Costs, and Policies for FY 2020 and Subsequent Years

Section 1886(d)(3)(E) of the Act requires the Secretary to update the wage index based on a survey of hospitals' costs that are attributable to wages and wage-related costs. In the September 1, 1994 IPPS final rule (59 FR 45356), we developed a list of "core" wage-related costs that hospitals may report on Worksheet S-3, Part II of the Medicare hospital cost report in order to include those costs in the wage index. Core wage-related costs include categories of retirement cost, plan administrative costs, health and insurance costs, taxes, and other specified costs such as tuition reimbursement.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20357 through 20358), in addition to these categories of core wage-related costs, we allow hospitals to report wage-related costs other than those on the core list if the other wage-related costs meet certain criteria. The criteria for including other wage-related costs in the wage index are discussed in the September 1, 1994 IPPS final rule (59 FR 45357) and clarified in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38132 through 38136). In addition, the criteria for including other wage-related costs in the wage index are listed in the Provider Reimbursement Manual (PRM), Part II, Chapter 40, Sections 4005.2 through 4005.4, Line 18 on W/S S-3 Part II and Line 25 and its subscripts on W/S S-3 Part IV of the Medicare cost report (Form CMS-2552-10, OMB control number 0938-0050).

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38132 through 38136), we clarified that a hospital may be able to report a wage-related cost (defined as the value of the benefit) that does not appear on the core list if it meets all of the following criteria:

- The wage-related cost is provided at a significant financial cost to the employer. To meet this test, the individual wage-related cost must be greater than 1 percent of total salaries after the direct excluded salaries are removed (the sum of Worksheet S-3, Part II, Lines 11, 12, 13, 14, Column 4, and Worksheet S-3, Part III, Line 3, Column 4).
- The wage-related cost is a fringe benefit as described by the IRS and is reported to the IRS on an employee's or contractor's W-2 or 1099 form as taxable income.
- The wage-related cost is not furnished for the convenience of the provider or otherwise excludable from income as a fringe benefit (such as a working condition fringe).

We noted that those wage-related costs reported as salaries on Line 1 (for example, loan forgiveness and sick pay accruals) should not be included as other wage-related costs on Line 18.

The above instructions for calculating the 1-percent test inadvertently omitted Line 15 for Home Office Part A Administrator on Worksheet S-3, Part II from the denominator. As we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20357), Line 15 should be included in the denominator because Home Office Part A Administrator is added to Line 1 in the wage index calculation. Therefore, in the

proposed rule, we stated that we were correcting the inadvertent omission of Line 15 from the denominator, and we clarified that, for calculating the 1-percent test, each individual category of the other wage-related cost (that is, the numerator) should be divided by the sum of Worksheet S-3, Part III, Lines 3 and 4, Column 4 (that is, the denominator). Line 4 sums the following lines from Worksheet S-3, Part II: Lines 11, 12, 13, 14, 14.01, 14.02, and 15. We also directed readers to instructions for calculating the 1-percent test in the Provider Reimbursement Manual (PRM), Part II, Chapter 40, Section 4005.4, Line 25 and its subscripts on Worksheet S-3, Part IV of the Medicare cost report (Form CMS-2552-10, OMB control number 0938-0050), which state: “Calculate the 1-percent test by dividing each individual category of the other wage-related cost (that is, the numerator) by the sum of Worksheet S-3, Part III, Lines 3 and 4, Column 4, (that is, the denominator).”

In addition to our discussion about calculating the 1-percent test and other criteria for including other wage-related costs in the wage index, we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38133 through 38166) that we would consider proposing to remove other wage-related costs from the wage index entirely.

In the FY 2018 IPPS/LTCH PPS proposed and final rules (82 FR 19901 and 82 FR 38133, respectively), we stated that we originally allowed for the inclusion of wage-related costs other than those on the core list because we were concerned that individual hospitals might incur unusually large wage-related costs that are not reflected on the core list but that may represent a significant wage-related cost. However, we stated in the FY 2018 IPPS/LTCH PPS proposed and final rules (82 FR 19901 and

82 FR 38133, respectively) that we were reconsidering allowing other wage-related costs to be included in the wage index because internal reviews of the FY 2018 wage data showed that only a small minority of hospitals were reporting other wage-related costs that meet the 1-percent test described earlier.

We stated in the FY 2019 IPPS/LTCH PPS proposed rule that, as part of the wage index desk review process for FY 2019, internal reviews showed that only 8 hospitals out of the more than 3,000 IPPS hospitals in the wage index had other wage-related costs that were correctly reported for inclusion in the wage index (83 FR 20357). Given the extremely limited number of hospitals nationally using Worksheet S-3, Part IV, Line 25 and subscripts, and Worksheet S-3, Part II, Line 18, to correctly report other wage-related costs in accordance with the criteria to be included in the wage index, we continue to believe that other wage-related costs do not constitute an appropriate and significant portion of wage costs in a particular labor market area. In other words, while other wage-related costs may represent costs that may have an impact on an *individual* hospital's average hourly wage, we do not believe that costs reported by only a very small minority of hospitals (less than 0.003 percent) accurately reflect the economic conditions of the labor market area as a whole in which such an individual hospital is located. The fact that only 8 hospitals out of more than 3,000 IPPS hospitals included in the FY 2019 IPPS proposed wage index reported other wage-related costs correctly in accordance with the 1-percent test and related criteria indicates that, in fact, other wage-related costs are *not* a relative measure of the labor costs to be included in the IPPS wage index. Therefore, we stated that we believe that inclusion of other wage-related

costs in the wage index in such a limited manner may distort the average hourly wage of a particular labor market area so that its wage index does not accurately represent that labor market area's current wages relative to national wages.

Furthermore, in the FY 2019 IPPS/LTCH PPS proposed rule, we also discussed that the open-ended nature of the types of other wage-related costs that may be included on Line 25 and its subscripts of Worksheet S-3 Part IV and Line 18 of Worksheet S-3 Part II, in contrast to the concrete list of core wage-related costs, may hinder consistent and proper reporting of fringe benefits. Our internal reviews indicate widely divergent types of costs that hospitals are reporting as other wage-related costs on these lines. We are concerned that inconsistent reporting of other wage-related costs further compromises the accuracy of the wage index as a representation of the relative average hourly wage for each labor market area. Our intent in creating a core list of wage-related costs in the September 1, 1994 IPPS final rule was to promote consistent reporting of fringe benefits, and we are increasingly concerned that inconsistent reporting of wage-related costs undermines this effort. Specifically, we expressed in the September 1, 1994 IPPS final rule that, since we began including fringe benefits in the wage index, we have been concerned with the inconsistent reporting of fringe benefits, whether because of a lack of provider proficiency in identifying fringe benefit costs or varying interpretations across fiscal intermediaries of the definition for fringe benefits in PRM-I, Section 2144.1 (59 FR 45356). We believe that the limited and inconsistent use of Line 25 and its subscripts of Worksheet S-3 Part IV and Line 18 of Worksheet S-3 Part II for reporting wage-related costs other than the core list indicate that including other wage-related costs

in the wage index compromises the accuracy of the wage index as a relative measure of wages in a given labor market area.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20358), for the reasons discussed earlier, for the FY 2020 wage index and subsequent years, we proposed to only include the wage-related costs on the core list in the calculation of the wage index and not to include any other wage-related costs in the calculation of the wage index.

Under our proposal, we stated we would no longer consider any other wage-related costs beginning with the FY 2020 wage index. Considering the extremely limited number of hospitals reporting other wage-related costs and the inconsistency in types of other wage-related costs being reported, we indicated we believe this proposal will help ensure a more consistent and more accurate wage index representative of the relative average hourly wage for each labor market area. In addition, we stated that we believe that this proposal to no longer include other wage-related costs in the wage index calculation benefits the vast majority of hospitals because most hospitals do not report other wage-related costs. We explained that because the wage index is budget neutral, hospitals in an area without other wage-related costs included in the wage index have their wage indexes reduced when other areas' wage indexes are raised by including other wage-related costs in their wage index calculation. We also noted that this proposal to exclude other wage-related costs from the wage index, starting with the FY 2020 wage index, contributes to agency efforts to simplify hospital paperwork burden because it would eliminate the need for Line 18 on Worksheet S-3, Part II and Line 25 and its subscripts on Worksheet S-3, Part IV of the Medicare cost report (Form CMS-2552-10, OMB control

number 0938–0050). We noted that we would include in the FY 2019 wage index the other wage-related costs of the 8 hospitals that accurately reported those costs in accordance with the criteria in effect as of FY 2018.

In summary, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20358), we clarified that our policy for calculating the 1-percent test includes Line 15 for Home Office Part A Administrator on Worksheet S-3, Part II in the denominator. In addition, we proposed to eliminate other wage-related costs from the calculation of the wage index for the FY 2020 wage index and subsequent years, as discussed earlier.

Comment: Several commenters supported CMS' proposal to only include core wage-related costs in the wage index calculation for the FY 2020 wage index and subsequent years because only 8 hospitals out of over 3,000 IPPS hospitals in the proposed 2019 wage index calculation had costs on this line for the FY 2018 wage index. One of these commenters reiterated that the inclusion of other wage-related costs in such a limited manner distorts the average hourly wage of a given labor market area, and does not accurately reflect the labor market area's current wages relative to national wages.

A few commenters opposed this proposal. One commenter stated that the proposal would unreasonably exclude legitimate fringe benefits that can be directly linked to individual employment. Another commenter disagreed that other wage-related costs of an individual hospital do not accurately reflect the economic conditions of the labor market as a whole, stating that these costs more accurately represent the economic conditions of the labor market and that the inclusion of these costs is important for the financial sustainability of the minority of hospitals incurring other wage-related costs.

The commenter urged CMS to continue allowing costs that meet current criteria for reporting other wage-related costs when hospitals undergo serious circumstantial changes and incur costs to maintain qualified staff; for example, during a nursing strike when a hospital may engage in costly contract nursing agreements that include housing costs. This commenter believed that the cost report should remain a mechanism for CMS to acknowledge unforeseen or changing other labor costs.

Response: We appreciate the commenters' support for our proposal. In response to the commenters who opposed the proposal, we continue to believe that other wage-related costs are not a relative measure of wages for the labor market area as a whole even though they may represent legitimate fringe benefits for individual hospitals. As we stated in the proposed rule, while other wage-related costs may represent costs that may have an impact on an *individual* hospital's average hourly wage, we do not believe that costs reported by only a very small minority of hospitals (less than 0.003 percent) accurately reflect the economic conditions of the labor market area as a whole in which such an individual hospital is located (83 FR 20357). Furthermore, we do not believe that our proposal to exclude these costs threatens the financial sustainability of the minority of hospitals incurring other wage-related costs because these costs are typically only a small percentage of total wages (costs need to meet the 1 percent test). Even if inclusion of these costs is indeed important for the financial sustainability of the minority of hospitals incurring other wage-related costs, we still do not agree that these costs should be included because they do not constitute a significant portion of wage costs in a particular labor market area and do not accurately represent the economic conditions of

the labor market area as a whole. We also do not believe that the wage index is the appropriate mechanism to acknowledge and reimburse unforeseen other labor costs resulting from serious circumstantial changes such as nursing strikes. The wage index is intended as a relative measure of labor costs, and inclusion of other wage-related costs in the wage index arising from occasional, disruptive circumstantial changes may distort the average hourly wage of a particular labor market area so that its wage index does not accurately represent that labor market area's current wages relative to national wages.

Comment: Several commenters requested clarification whether physician malpractice costs would still be included in the calculation of the wage index if other wage-related costs are eliminated. Several commenters cited the September 1, 1994 **Federal Register** (59 FR 45358) which allows only malpractice policies that list actual names or specific titles of covered employees in the wage index as “explicit guidance and longstanding practice” that inclusion of malpractice costs has “long been recognized by CMS” when meeting certain criteria. Commenters also maintained that if CMS is proposing to exclude malpractice costs as an other wage-related cost, this would create an inconsistency when comparing hospitals across the country by treating salaried and contract physicians differently.

Furthermore, the commenters suggested that the number of hospitals reporting physician malpractice costs should be included in the number of hospitals that currently report other wage-related costs. One commenter stated that CMS' count of eight hospitals in the country reporting noncore wage-related costs is incorrect because malpractice cost is a noncore wage-related cost that is required, by cost report instruction,

to be included with physician wage-related costs rather than on the noncore wage-related cost line. The commenter explained that CMS required physicians' wage-related costs to be listed separately, effective with FY 1994, because CMS anticipated excluding Part A physicians' wage-related costs from the wage index, yet subsequently decided for FY 1999 onward to keep Part A physicians' wage-related cost in the wage index. Similarly, another commenter stated that CMS is "vastly underestimating" the impact of removing other wage-related costs from the wage index because malpractice insurance may currently be reported as other wage-related costs for certain categories of employees (for example, physicians, interns and residents, among others) on Lines 20 through 25, and 25.50 through 25.53 of Worksheet S-3, Part II. The commenter urged CMS to more thoroughly analyze the potential impact of the proposal, stating that it would be "premature for CMS to eliminate other wage-related costs from the wage index without a comprehensive review" of the magnitude of the proposal.

Response: We are clarifying that our proposal to remove other wage-related costs from the wage index includes removing all categories of other wage-related costs, even those not currently reported on Line 18 of Worksheet S-3, Part II--for example, contract labor. In addition, this removal would include other wage-related costs such as malpractice insurance associated with both employees and contract labor. The instructions for calculating the 1-percent test on Worksheet S-3, Part IV include the following note: "The other wage related costs associated with contract labor and home office/related organization personnel are included in the numerator because these other wage related costs are allowed in the wage index (in addition to other wage related costs

for direct employees), assuming the requirements for inclusion in the wage index are met.” Therefore, by excluding other wage-related costs from the wage index, we are clarifying that other wage-related costs for contract labor would also be excluded from the wage index calculation. Therefore, we disagree with the commenter that excluding other wage-related costs creates an inconsistency when comparing hospitals across the country by treating salaried and contract physicians differently.

In response to the commenters’ citation of the September 1, 1994 **Federal Register** as evidence of CMS’ longstanding practice of allowing malpractice insurance in the wage index if actual names or specific titles of covered employees are listed, we emphasize that this guidance is applicable for reporting malpractice insurance as an other wage-related cost between 1994 and prior to the FY 2020 wage index, because our proposal is to prospectively eliminate other wage-related costs from the calculation of the wage index beginning with FY 2020 for reasons enumerated in the proposed rule.

Regarding the requirement for physician other wage-related costs to be listed separately, the commenters are correct that the instructions for Worksheet S-3, Part II, Line 18, currently include the following note: “Do not include the wage-related costs for physicians Parts A and B, non-physician anesthesiologists Part A and B, interns and residents in approved programs, and home office personnel.” However, we remind the commenters that *all* other wage-related costs, even those not reported on Line 18, must meet the 1-percent test for other-wage related costs, as described in the September 1, 1994 IPPS final rule (59 FR 45357) and clarified in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38132 through 38136). Therefore, other wage-related

costs associated with physicians must meet the 1-percent test. The instructions for calculating the 1-percent test on Worksheet S-3, Part IV, Line 25, read, “Calculate the 1-percent test by dividing each individual category of the other wage related cost (that is, the numerator) by the sum of Worksheet S-3, Part III, lines 3 and 4, column 4, (that is, the denominator). The other wage related costs associated with contract labor and home office/related organization personnel are included in the numerator because these other wage related costs are allowed in the wage index (in addition to other wage related costs for direct employees), assuming the requirements for inclusion in the wage index are met. For example, if a hospital is including parking garage costs as an other wage related cost that is reported on the W-2 or 1099 form, when running the 1-percent test, include in the numerator all the parking garage other wage related cost *for direct salary employees, contracted employees, and home office employees*, and divide by the sum of Worksheet S-3, Part III, Lines 3 and 4, Column 4.

Calculate the 1-percent test only one time for a category of other wage related costs, *inclusive of other wage related costs for employees, contracted employees, and home office employees.*” (emphasis added)

In response to the commenter who asserted that CMS is “vastly underestimating” the impact of removal of other wage-related costs and specifically malpractice insurance costs from the wage index, we conducted additional analysis to quantify the number of hospitals reporting malpractice insurance on lines other than Line 18 of Worksheet S-3, Part II, as an other wage-related cost meeting the 1-percent test. For the FY 2019 wage index, only 41 hospitals reported costs on Worksheet S-3, Part II, Line 22 (which

includes core wage-related costs and may or may not include malpractice insurance as an other wage-related cost) that were greater than 1 percent of total salaries. Of those 41 hospitals, it is unlikely that the wage-related costs reported for Physician Part A Administrative were entirely comprised of malpractice insurance costs. Therefore, the number of hospitals reporting malpractice insurance as an other wage-related cost and which exceeds 1-percent of total salaries is likely less than 1.25 percent of the total hospitals in the wage index (that is, 41/3,283 IPPS hospitals included in the FY 2019 final wage index). In addition, we conducted further analysis and found that fewer than 30 hospitals indicated a description of malpractice on Line 25 of Worksheet S-3, Part IV, for other wage-related costs, and of those hospitals, only 3 hospitals met the 1-percent test criteria for inclusion. Consequently, we believe that we have conducted the comprehensive review requested by the commenter and thoroughly analyzed the potential impact of this proposal, and concluded that the number of hospitals reporting malpractice as an other wage-related cost is minimal. Therefore, we continue to believe that removing other wage-related costs reported on Line 18 and other lines from the wage index is appropriate because costs reported by only a very small minority of hospitals do not accurately reflect the economic conditions of the labor market area as a whole.

Comment: Commenters recommended that, if CMS eliminates other wage-related costs from the wage index, CMS revise the core wage-related costs list to include malpractice costs. The commenters noted that malpractice coverage is required by State law for a considerable number of States, and, according to one commenter, is a significant cost that consistently meets the 1-percent test. Some commenters suggested

additional fringe benefits to be added to the core wage-related cost list such as employee meals, transportation and parking costs. One commenter opposed CMS removing other wage-related costs without the opportunity for public comment on expanding the categories classified as “core” wage-related costs. This commenter emphasized that the current list of “core” benefits has not been updated since FY 1995 and it is likely that benefit cost structures and components have changed since then.

Response: We understand the commenter’s assertion that expanding the categories classified as core wage-related costs may be warranted as benefit structures evolve over time. However, after conducting the additional analysis discussed earlier to evaluate the magnitude of hospitals reporting malpractice insurance costs, we disagree with the commenter’s statement that malpractice insurance cost is a significant cost that consistently meets the 1-percent test, as well as the other criteria that would need to be met for malpractice insurance to be reported as an other wage-related cost. As we stated in the proposed rule (83 FR 20358), our intent in creating a core list of wage-related costs in the September 1, 1994 IPPS final rule was to promote consistent reporting of fringe benefits. The extremely limited number of hospitals correctly reporting these costs noted in the aforementioned additional analysis indicates that malpractice insurance is not a significant wage-related cost consistently reported by most hospitals. We do not believe it is warranted to add an expense to the list of core wage-related costs that is only reported by approximately less than 1.25 percent of hospitals in the wage index. Similarly, we do not believe that employee meals, transportation, and parking costs constitute a significant expense for most hospitals that should be added to the core

wage-related cost list. We note that, of the 8 hospitals correctly reporting wage-related costs on Line 18 of Worksheet S-3, Part II, for the FY 2019 wage index, only 2 of those hospitals reported parking costs that met the 1-percent test, and only 2 hospitals reported cafeteria costs that met the 1-percent test.

Therefore, after consideration of the public comments we received, for the reasons discussed above and in the proposed rule, we are finalizing our proposal, without modification, to eliminate other wage-related costs from the calculation of the wage index for the FY 2020 wage index and subsequent years. We also are clarifying that all other wage-related costs, even those not reported on Worksheet S-3, Part II, Line 18 and Worksheet S-3, Part IV, Line 25 and subscripts, such as contract labor, are being removed from the calculation of the wage index, and we will update the cost report instructions accordingly.

### 3. Codification of Policies Regarding Multicampus Hospitals

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20358 through 20360), we have received an increasing number of inquiries regarding the treatment of multicampus hospitals as the number of multicampus hospitals has grown in recent years. While the regulations at § 412.230(d)(2)(iii) and (v) for geographic reclassification under the MGCRB include criteria for how multicampus hospitals may be reclassified, the regulations at § 412.92 for sole community hospitals (SCHs), § 412.96 for rural referral centers (RRCs), § 412.103 for rural reclassification, and § 412.108 for Medicare-dependent, small rural hospitals (MDHs) do not directly address multicampus hospitals. Thus, in the FY 2019 proposed rule, we proposed to codify in these regulations

the policies for multicampus hospitals that we have developed in response to recent questions regarding CMS' treatment of multicampus hospitals for purposes other than geographic reclassification under the MGCRB.

We stated in the proposed rule (83 FR 20358) that the proposals (stated below) applied to hospitals with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the IPPS and that meet the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, also referred to as multicampus hospitals or hospitals with remote locations. We proposed that a main campus of a hospital cannot obtain an SCH, RRC, or MDH status or rural reclassification independently or separately from its remote location(s), and vice versa. Rather, if the criteria are met in the regulations at § 412.92 for SCHs, § 412.96 for RRCs, § 412.103 for rural reclassification, or § 412.108 for MDHs (as discussed later in this section), the hospital (that is, the main campus and its remote location(s)) would be granted the special treatment or rural reclassification afforded by the aforementioned regulations.

We stated in the proposed rule that we believe this is an appropriate policy for two reasons. First, each remote location of a hospital is included on the main campus's cost report and shares the same provider number. That is, the main campus and remote location(s) would share the same status or rural reclassification because the hospital is a single entity with one provider agreement. Second, it would not be administratively feasible for CMS and the MACs to track every hospital with remote locations within the same CBSA and to assign different statuses or rural reclassifications exclusively to the

main campus or to its remote location. We note that, for wage index purposes only, CMS tracks multicampus remote locations located *in different CBSAs* in order to comply with the statutory requirement to adjust for geographic differences in hospital wage levels (section 1886(d)(3)(E) of the Act). However, for purposes of rural reclassification under § 412.103, we do not believe it would be appropriate for a main campus and remote location(s) (whether located in the same or separate CBSAs) to be reclassified independently or separately from each other because, unlike MGCRB reclassifications which are used only for wage index purposes, § 412.103 rural reclassifications have payment effects other than wage index (for example, payments to disproportionate share hospitals (DSHs), and non-Medicare payment provisions, such as the 340B Drug Pricing Program administered by HRSA).

To qualify for rural reclassification or SCH, RRC, or MDH status, we proposed that a hospital with remote locations must demonstrate that both the main campus and its remote location(s) satisfy the relevant qualifying criteria. A hospital with remote locations submits a joint cost report that includes data from its main campus and remote location(s), and its MedPAR data also combine data from the main campus and remote location(s). We believe that it would not be feasible to separate data by location, nor would it be appropriate, because we consider a main campus and remote location(s) to be one hospital. Therefore, where the regulations at § 412.92, § 412.96, § 412.103, and § 412.108 require data, such as bed count, number of discharges, or case-mix index, for example, to demonstrate that the hospital meets the qualifying criteria, we proposed to

codify in our regulations that the combined data from the main campus and its remote location(s) are to be used.

For example, if a hospital with a main campus with 200 beds and a remote location with 75 beds applies for RRC status, the combined count of 275 beds would be considered the hospital's bed count, and the main campus and its remote location would be granted RRC status if the hospital applies during the last quarter of its cost reporting period and both the main campus and the remote location are located in a rural area as defined in 42 CFR Part 412, subpart D. This is consistent with the regulation at § 412.96(b)(1), which states, in part, that the number of beds is determined under the provisions of § 412.105(b). For § 412.105(b), beds are counted from the main campus and remote location(s) of a hospital. We believe this is also consistent with § 412.96(b)(1)(ii), which sets forth the criteria that the hospital is located in a rural area and the hospital has a bed count of 275 or more beds during its most recently completed cost reporting period, unless the hospital submits written documentation with its application that its bed count has changed since the close of its most recently completed cost reporting period for one or more of several reasons, *including the merger of two or more hospitals*.

Similarly, combined data would be used for demonstrating the hospital meets criteria at § 412.92 for SCH status. For example, the patient origin data, which are typically MedPAR data used to document the boundaries of the hospital's service area as required in § 412.92(b)(1)(ii) and (iii), would be used from both locations. We reiterate that we believe this is the appropriate policy because the main campus and remote

location are considered one hospital and that it is the only administratively feasible policy because there is currently no way to split the MedPAR data for each location.

For § 412.103 rural reclassification, we stated in the proposed rule (83 FR 20359) that a hospital with remote location(s) seeking to qualify under § 412.103(a)(3), which requires that the hospital would qualify as an RRC or SCH if the hospital were located in a rural area, would similarly demonstrate that it meets the criteria at § 412.92 or at § 412.96, such as bed count, by using combined data from the main campus and its remote location(s) (with the exception of certain criteria discussed below related to location, mileage, travel time, and distance requirements). We refer readers to the portions of our discussion that explain how hospitals with remote locations would meet criteria for RRC or SCH status.

A hospital seeking MDH status would also use combined data for bed count and discharges to demonstrate that it meets the criteria at § 412.108(a)(1). For example, if the main campus of a hospital has 75 beds and its remote location has 30 beds, the bed count exceeds 100 beds and the hospital would not satisfy the criteria at § 412.108(a)(1)(i) (which we proposed, and are finalizing, to be redesignated as § 412.108(a)(1)(ii)).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20359), we reminded readers that, under § 412.108(b)(4) and § 412.92(b)(3)(i), an approved MDH or SCH status determination remains in effect unless there is a change in the circumstances under which the status was approved. We stated that while we believe that this proposal is consistent with the policies for multicampus hospitals that we have developed in response to recent questions, current MDHs and SCHs should make sure that this proposal does

not create a change in circumstance (such as an increase in the number of beds to more than 100 for MDHs or to more than 50 for SCHs), which an MDH or SCH is required to report to the MAC within 30 days of the event, in accordance with § 412.108(b)(4)(ii) and (iii) and § 412.92(b)(3)(ii) and (iii).

In the FY 2019 proposed rule, we discussed that, with regard to other qualifying criteria set forth in the regulations at §§ 412.92, 412.96, 412.103, and 412.108 that do not involve data that can be combined, specifically qualifying criteria related to location, mileage, travel time, and distance requirements, a hospital would need to demonstrate that the main campus and its remote location(s) each independently satisfy those requirements in order for the entire hospital, including its remote location(s), to be reclassified or obtain a special status.

To qualify for SCH status, for example, it would be insufficient for only the main campus, and not the remote location, to meet distance criteria. Rather, the main campus and its remote location(s) would each need to meet at least one of the criteria at § 412.92(a). Specifically, the main campus and its remote location must each be located more than 35 miles from other like hospitals, or if in a rural area (as defined in § 412.64), be located between 25 and 35 miles from other like hospitals if meeting one of the criteria at § 412.92(a)(1) (and each meet the criterion at § 412.92(a)(1)(iii) if applicable), or between 15 and 25 miles from other like hospitals if the other like hospitals are inaccessible for at least 30 days in each 2 out of 3 years (§ 412.92(a)(2)), or travel time to the nearest like hospital is at least 45 minutes (§ 412.92(a)(3)). We believe that this is necessary to show that the hospital is indeed the sole source of inpatient hospital services

reasonably available to individuals in a geographic area who are entitled to benefits under Medicare Part A, as required by section 1886(d)(5)(D)(iii)(II) of the Act. For hospitals with remote locations that apply for SCH classification under § 412.92(a)(1)(i) and (ii), combined data are used to document the boundaries of the hospital's service area using data from across both locations, as discussed earlier, and all like hospitals within a 35-mile radius of each location are included in the analysis. To be located in a rural area to use the criteria in § 412.92(a)(1), (2), and (3), the main campus and its remote location(s) must each be either geographically located in a rural area, as defined in § 412.64, or reclassified as rural under § 412.103.

Similarly, for RRC classification under § 412.96 and MDH classification under § 412.108, the main campus and its remote location(s) must each be either geographically located in a rural area, as defined in 42 CFR Part 412, subpart D, or reclassified as rural under § 412.103 to meet the rural requirement portion of the criteria at § 412.96(b)(1), § 412.96(c), or § 412.108(a)(1) (or for MDH, be located in a State with no rural area and satisfy any of the criteria under § 412.103(a)(1) or (a)(3) or under § 412.103(a)(2) as of January 1, 2018). For hospitals with remote locations that apply for RRC classification under § 412.96(b)(2)(ii) or § 412.96(c)(4), 25 miles is calculated from each location (the main campus and its remote location(s)), and combined data from both the main campus and its remote location(s) are used to calculate the percentage of Medicare patients, services furnished to Medicare beneficiaries, and discharges.

For hospitals seeking to reclassify as rural by meeting the criteria at § 412.103(a)(1), (a)(2), or (a)(6), we also proposed to codify in our regulations that it

would not be sufficient for only the main campus, and not its remote location(s), to demonstrate that its location meets the aforementioned criteria. Rather, under § 412.103(a)(1) and (2) (which also are incorporated in § 412.103(a)(6)), we proposed that the main campus and its remote location(s) must each either be located (1) in a rural census tract of an MSA as determined under the most recent version of the Goldsmith Modification, the Rural-Urban Commuting Area codes (§ 412.103(a)(1)), or (2) in an area designated by any law or regulation of the State in which it is located as a rural area, or be designated as a rural hospital by State law or regulation (§ 412.103(a)(2)). For hospitals seeking to reclassify as rural by meeting the criteria in § 412.103(a)(3), which require that the hospital would qualify as an RRC or a SCH if the hospital were located in a rural area, we refer readers to our discussion presented earlier that explains how hospitals with remote locations would meet criteria for RRC or SCH status.

In the FY 2019 IPPS/LTCH PPS proposed rule, we noted that we have also received questions about how a hospital with remote locations that trains residents in approved medical residency training programs would be treated for IME adjustment purposes if it reclassifies as rural under § 412.103. As we noted in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50114), the rural reclassification provision of § 412.103 only applies to IPPS hospitals under section 1886(d) of the Act. Therefore, it applies for IME payment purposes, given that the IME adjustment under section 1886(d)(5)(B) of the Act is an additional payment under IPPS. In contrast, sections 1886(a)(4) and (d)(1)(A) of the Act exclude direct GME costs from operating costs and these costs are not included in the calculation of the IPPS payment rates for inpatient

hospital services. Payment for direct GME is separately authorized under section 1886(h) of the Act and, therefore, not subject to § 412.103. Therefore, if a geographically urban teaching hospital reclassifies as rural under § 412.103, such a reclassification would only affect the teaching hospital's IME adjustment, and not its direct GME payment. Accordingly, in the FY 2019 proposed rule, we clarified that in order for the IME cap adjustment regulations at § 412.105(f)(1)(iv)(A), § 412.105(f)(1)(vii), and § 412.105(f)(1)(xv) to be applicable to a teaching hospital with a main campus and a remote location(s), the main campus and its remote location(s), respectively, must each be either geographically located in a rural area as defined in 42 CFR Part 412, subpart D, or reclassified as rural under § 412.103. For direct GME purposes at § 413.79, both the main campus and its remote location(s) are required to be geographically rural because a hospital's status for any direct GME payments or adjustments is unaffected by a § 412.103 rural reclassification.

We proposed to codify these policies regarding the application of the qualifying criteria for hospitals with remote locations in the regulations at § 412.92 for SCHs, § 412.96 for RRCs, § 412.103 for rural reclassification, or § 412.108 for MDHs.

Specifically, we proposed to revise these regulations as follows:

We proposed to add paragraph (a)(4) to § 412.92 to specify that, for a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the IPPS and that meets the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, combined data from the main campus and its remote location(s) are required to demonstrate that the

criteria at § 412.92(a)(1)(i) and (ii) are met. For the mileage and rural location criteria at § 412.92(a) and the mileage, accessibility, and travel time criteria specified at § 412.92(a)(1) through (a)(3), the hospital must demonstrate that the main campus and its remote location(s) each independently satisfy those requirements.

In § 412.96, we proposed to redesignate paragraph (d) as paragraph (e) and add a new paragraph (d) to specify that, for a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the IPPS and that meets the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, combined data from the main campus and its remote location(s) are required to demonstrate that the criteria at § 412.96(b)(1) and (2) and (c)(1) through (c)(5) are met. For purposes of meeting the rural location criteria in § 412.96(b)(1) and (c) and the mileage criteria in § 412.96(b)(2)(ii) and (c)(4), the hospital must demonstrate that the main campus and its remote location(s) each independently satisfy those requirements.

We proposed to add paragraph (a)(7) to § 412.103 to specify that, for a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the IPPS and that meets the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, the hospital must demonstrate that the main campus and its remote location(s) each independently satisfy the location criteria specified in § 412.103(a)(1) and (2) (which criteria also are incorporated in § 412.103(a)(6)). As discussed in our response to public comments below, we note that we inadvertently referenced § 412.103(a)(6) (which applies to critical

access hospitals (CAHs)) in proposed paragraph § 412.103(a)(7). As explained in the proposed rule (83 FR 20358) and above, these policies apply to hospitals where services are provided and billed under the IPPS. Thus, these policies do not apply to CAHs, which are not paid under the IPPS. Accordingly, as discussed in response to comments below, we are not including a reference to § 412.103(a)(6) in § 412.103(a)(7), as finalized in this rule.

We proposed to add paragraph (a)(3) to § 412.108 to specify that, for a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the IPPS and that meets the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, combined data from the main campus and its remote location(s) are required to demonstrate that the criteria in § 412.108(a)(1) and (2) are met. We stated that for the location requirement specified at proposed amended paragraph (a)(1)(i) of this section, the hospital must demonstrate that the main campus and its remote location(s) each independently satisfy this requirement. (We note that we are finalizing the proposed amendments to § 412.108(a)(1)(i) as discussed in section IV.G.2.a. of the preamble of this final rule.)

Comment: Commenters expressed appreciation for CMS providing greater clarity concerning the treatment of multicampus hospitals by amending the regulations for SCHs, RRCs, rural reclassifications, and MDHs to address the situation of multicampus hospitals. One commenter specifically thanked CMS for an “important acknowledgement of the changing nature of the hospital industry”, and stated that these

proposals would give hospitals a clearer understanding of the implications of combining with other hospitals as the consolidation of the industry continues.

Several commenters requested clarification regarding the effective date of the proposals. The commenters asked what will happen to multicampus hospitals that have already reclassified as rural, and whether the proposals would affect new classification requests only and grandfather-in existing SCHs, RRCs, and MDHs, or if those hospitals with existing reclassifications or special statuses would be required to reapply according to the criteria presented in the proposed rule. One commenter specifically questioned CMS' authority to make a rule effective retroactively and asked that CMS clarify that the policy is effective for applications submitted on or after October 1, 2018. Similarly, another commenter stated that while the proposals are presented as a codification, they are a change in longstanding CMS policy because CMS has "long been treating multicampus facilities as distinct entities for a variety of purposes." Some commenters requested that CMS not finalize the codification without research to demonstrate its impact because they view it as a change in policy. Commenters urged CMS to provide additional guidance and information on the policies for treatment of multicampus hospitals.

Response: We appreciate the commenters' support and agree that codification of the policies regarding the treatment of multicampus hospitals for purposes of special statuses and reclassification is appropriate and provides greater clarity. We also appreciate the commenters' feedback on our existing policies for multicampus hospitals. However, as we stated in the proposed rule (83 FR 20358), we proposed to codify in

regulations our existing policies for multicampus hospitals and did not propose to change them. Thus, the policies discussed in the proposed rule are our existing policies currently in effect, and our intent was to provide greater clarification of these policies by codifying them in the regulations. If, after further consideration of the feedback we have received, we decide to seek to change our current policies, we believe the most appropriate approach would be to propose changes to those policies through future notice-and-comment rulemaking.

In response to the commenters' questions regarding the effective date of the policies discussed in the proposed rule, we reiterate that we proposed to codify in the regulations our existing policies for multicampus hospitals, and thus these policies have been and continue to be in effect. Consequently, there is no need to "grandfather in" multicampus hospitals with existing special statuses or reclassifications. Similarly, we disagree that we are promulgating a rule retroactively because these policies are CMS' longstanding policies. We note that the commenter's assertion that these proposed codifications are a change in longstanding CMS policy were not accompanied by examples of CMS treating multicampus facilities as distinct entities. It is unclear what the commenter was referring to in support of this assertion. If the commenter was referring to CMS' treatment of multicampus facilities for wage index purposes, as mentioned in the proposed rule (83 FR 20358), CMS tracks multicampus remote locations located *in different CBSAs* for wage index purposes only, in order to comply with the statutory requirement to adjust for geographic differences in hospital wage levels (section 1886(d)(3)(E) of the Act).

Similarly, because we proposed to codify existing policy, multicampus hospitals with existing special status or rural reclassification would not be required to reapply according to the criteria codified in this rule, as the current regulations at §§ 412.92(3)(i), 412.103(f), and 412.108(b)(4) state that an approved SCH classification, rural reclassification, or MDH status determination, respectively, remains in effect without need for reapproval unless there is a change in the circumstances under which the classification or determination was approved. We are reiterating that current MDHs and SCHs should make sure that any change in circumstance (such as an increase in the number of beds to more than 100 for MDHs or to more than 50 for SCHs) as a result of the MDH or SCH opening a remote location, for example, is correctly reported to the MAC within 30 days of the event in accordance with §§ 412.108(b)(4)(ii) and (iii) and 412.92(b)(3)(ii) and (iii).

With regard to the commenters' request that CMS not finalize its proposals to codify in the regulations its existing policies, we note that not finalizing the proposals would still leave our current policies unchanged and in effect with regard to multicampus hospitals and qualification for special statuses and reclassifications, although they would not be codified in regulations. We believe not finalizing the proposals to codify these policies in regulations would create confusion surrounding the existing policies currently in effect.

In response to commenters requesting more information and guidance on our existing policies, we agree and will consider further provider education on our existing policies, where appropriate.

Comment: Several commenters opposed CMS' proposals, stating that while they understood the policy objectives being advanced by CMS and agreed that remote campuses should not be categorically ignored for purposes of these determinations, the policies associated with the codification may have the unintended consequence of harming access to rural health care. Specifically, some commenters were concerned that SCHs are at risk of losing their designation if another hospital opens a remote location near them or if the SCH opens a remote location near other hospitals, especially if the remote location is a "microhospital" that does not offer a full array of inpatient services.

One commenter agreed with CMS' policy in the scenario of the opening of a remote location that provides general inpatient services within 24 miles from an existing SCH. The commenter asserted that, while the remote location might cause the SCH to lose its classification as an SCH, this outcome appears "congruent with the intent of law" because the former SCH is no longer the sole source of inpatient services reasonably available to individuals in the geographic area. However, this commenter and other commenters disagreed with CMS' policy of including a remote location for determining SCH qualification if the remote location (either of a nearby hospital or of the SCH) does not meet the definition of a hospital or a like hospital or does not provide inpatient services reasonably available to individuals in the geographic area, such as a remote clinic with a small inpatient obstetrics and gynecology or labor and delivery unit or a few inpatient psychiatric or rehabilitation beds as a distinct part unit. One commenter stated that examining remote locations for distance requirements would be particularly concerning if the remote location does not provide 24/7 emergency care, because this

would allow a small remote clinic with limited hours and providers to result in loss of access to life-saving emergency care. Another commenter similarly stated that the policy may allow a “competitive tactic inconsistent with the intent of the rule” if a hospital could lose SCH status as a result of a competing hospital opening a remote location that does not functionally represent a like provider.

Commenters urged CMS to carefully evaluate the impacts of the proposals on rural health care and consider a range of alternatives, including: not finalizing the proposal to codify certain policies for multicampus hospitals with respect to SCHs; finalizing the proposal with protections for existing SCHs; excluding SCHs from the evaluation of the qualifying criteria on a combined basis; modifying the policy to apply only if the remote location is a full service inpatient facility; or apply the policy only if the remote location on its own could be licensed as a hospital under State law. One commenter specifically suggested that a remote location providing only limited inpatient services should not be considered a like provider.

Response: As stated earlier, we did not propose to change our policies; rather, we proposed to codify our current policies. We note that our current policies benefit access to rural health care for hospitals seeking RRC status and rural reclassification under § 412.103(a)(3) by allowing bed counts from the main hospital and remote locations to be combined, making RRC status and rural reclassification under § 412.103(a)(3) more easily obtainable. However, we understand the commenters’ concerns that SCH status may be more difficult to obtain and maintain under our longstanding policies that consider remote locations. Therefore, we note that our current

polices contain some existing safeguards for SCHs because these policies only apply to remote locations where services are provided and billed under the IPPS, and that hospitals are only compared to like hospitals for purposes of meeting SCH criteria under § 412.92(a). Specifically, according to the definition at § 412.92(c)(3), a hospital is considered a like hospital if the hospital furnishes short-term, acute care, and the total inpatient days attributable to the units of the nearby hospital that provides a level of care characteristic of the level of care payable under the acute care hospital IPPS are more than 8 percent of the similarly calculated total inpatient days of the hospital seeking SCH designation. Furthermore, we note that, for hospitals qualifying for SCH status under the criteria at § 412.92(a)(1), SCH status may not be impacted by the opening of a remote location within 25 to 35 miles if the hospital continues to meet one of the requirements at § 412.92(a)(1)(i) through (iii). For example, a hospital that qualified for SCH classification under § 412.92(a)(1)(i) would not automatically lose SCH status if a hospital opens up within 25 to 35 miles if it continues to meet the requirements at § 412.92(a)(1)(i) by providing at least 75 percent of the inpatient care in its service area compared to like hospitals. Specifically, § 412.92(a)(1)(i) requires that no more than 25 percent of residents who become hospital inpatients or no more than 25 percent of the Medicare beneficiaries who become hospital inpatients in the hospital's service area are admitted to other like hospitals located within a 35-mile radius of the hospital, or, if larger, within its service area.

However, we recognize that, under our current policies, for purposes of determining whether a nearby hospital consisting of a main campus and a remote location

would be considered a like hospital with respect to an SCH or a hospital seeking SCH classification, the inpatient days of the remote location and the main hospital are not distinguishable for purposes of calculating the 8 percent. We also recognize that there may be scenarios in which a remote location that is within range of an SCH or a hospital seeking SCH classification and provides only very limited IPPS services is considered a like hospital by virtue of its being a remote location of a larger main hospital. We acknowledge the concerns raised by the commenters with respect to ensuring access to care in such situations, and we will take the feedback we received on this issue into consideration for potential future rulemaking.

Comment: One commenter requested that CMS eliminate the new additional burden for SCHs of ensuring that they comply with the policies by amending the regulation at § 412.92(b)(3)(ii)(A) requiring an SCH to notify the MAC within 30 days of the opening of a new hospital in its service area to exclude the opening of a new remote location of another hospital.

Response: This proposed codification of our longstanding policy with respect to SCHs did not create any new additional burden for SCHs because the requirement at § 412.92(b)(3)(ii)(A) to notify the MAC within 30 days of the opening of a new hospital in its service area always included the opening of a new remote location.

Comment: One commenter requested additional justification for the policy that both the main hospital and all remote locations must meet the same geographic criteria.

Response: With regard to the request for justification as to why both the main campus and all remote locations must meet geographic criteria, we note that we did not

propose any changes to our existing policy. We continue to believe our policy to require both the main campus and remote location(s) to meet criteria involving location, mileage, travel time, and distance rather than require only the main campus to meet criteria is appropriate because both the main campus and remote location(s) benefit from the special status or rural reclassification if approved. As we stated in the proposed rule (83 FR 20358), each remote location of a hospital is included on the main campus' cost report and shares the same provider number. That is, the main campus and remote location(s) would share the same status or rural reclassification because we consider the hospital to be a single entity with one provider agreement. We also note that the main campus and remote location(s) cannot jointly meet qualifying criteria that involve location, mileage, travel time, and distance by totaling miles or minutes in the same way that data derived from the cost report or MedPAR, such as bed count, for example, can be combined. Furthermore, as we stated in the proposed rule, we believe that requiring both the main campus and remote location(s) to meet at least one of the criteria at § 412.92(a) for SCH status is necessary to show that the hospital is indeed the sole source of inpatient hospital services reasonably available to individuals in a geographic area who are entitled to benefits under Medicare Part A, as required by section 1886(d)(5)(D)(iii)(II) of the Act. Similarly, for MDH and RRC status, we maintain that requiring both the main campus and remote location(s) to be rural is necessary for the hospital to be considered located in a rural area, as required by sections 1886(d)(5)(G)(iv)(I) and 1886(d)(5)(C)(i) of the Act. Finally, we believe that requiring both the main campus and remote location(s) to meet at least one of the criteria at § 412.103(a) for urban to rural

reclassification is necessary to consider the hospital as meeting the requirements at section 1886(d)(8)(E) of the Act, which are implemented at § 412.103.

Comment: Several commenters requested clarifications of our policies. One commenter requested that CMS confirm and clarify that data from an IPPS excluded distinct part unit, such as an off-campus inpatient psychiatric unit, would not be combined with the main campus data and that the IPPS-excluded location would not be required to satisfy the SCH, RRC, MDH, or rural reclassification requirements in order for the hospital to qualify as an SCH, RRC, or MDH or to reclassify as rural. Another commenter asked for clarification regarding what standard would be applied for mileage requirements when determining distance between facilities without inpatient beds. Another commenter sought clarification to confirm that the proposals are not intended to apply to CAHs.

Response: We are confirming that the data from an IPPS-excluded unit, such as an off-campus inpatient psychiatric unit, would not be combined with the main campus data, and that a distinct part unit would not be required to satisfy the SCH, RRC, MDH, or rural reclassification requirements in order for the hospital to qualify as an SCH, RRC, or MDH or to reclassify as rural. As we stated in the proposed rule, these policies apply to hospitals with a main campus and one or more remote locations under a single provider agreement *where services are provided and billed under the IPPS* and that meet the provider-based criteria at § 413.65 as a main campus and a remote location of a hospital, also referred to as multicampus hospitals or hospitals with remote locations.

For purposes of these policies, a facility without inpatient beds would not be considered for mileage requirements. We also are clarifying that because these policies apply to hospitals where services are provided and billed under the IPPS, these policies do not apply to CAHs. We note that we inadvertently included in proposed § 412.103(a)(7) a reference to § 412.103(a)(6), which pertains to CAHs. Thus, in this final rule, we are deleting the reference to § 412.103(a)(6) in § 412.103(a)(7).

Comment: One commenter maintained that it is not feasible for providers to calculate distances between themselves and another provider's remote campus because only the main campus address is included in Healthcare Provider Cost Reporting Information System (HCRIS) cost report data, and even where the other hospitals may report multicampus hospitals in different CBSAs on their cost report, the remote campus data do not include a street address for actual distance calculations to another hospital's remote location. The commenter, therefore, recommended that CMS not implement the proposals until such time that CMS changes the cost report Worksheet S-2 questions to include the street address of all remote locations and that information becomes available in the published HCRIS data so that hospitals can research and identify main campus and remote locations of other hospitals within the distance requirement radius.

Response: While the commenter is correct that only the address of a main campus is included in the HCRIS cost report data, we believe that the street address of another hospital's remote location is readily available public information that should be easily obtainable. We note that, for SCH applications, for which calculating distance to other like hospitals is necessary, CMS and the MACs verify all supporting

documentation, which includes information regarding all other hospitals' main campuses and remote locations within distance requirements specified at § 412.92(a), or the larger of a 35-mile radius or its service area if applying under the criterion at § 412.92(a)(1)(i).

Comment: One commenter indicated that combining bed counts from a main campus and remote locations discourages MDHs from establishing remote locations because opening a remote location may cause the MDH to exceed 100 beds and lose status. The commenter urged CMS not to implement the proposals and encouraged the agency to exempt existing MDHs if these proposed codifications are finalized.

Response: We do not believe it would be appropriate to exclude beds from remote location(s) of an MDH in the hospital's bed count because we consider remote locations to be part of the hospital and section 1886(d)(5)(G)(iv)(II) of the Act describes an MDH as a hospital with not more than 100 beds. In other words, we do not believe that a hospital should maintain MDH status if the hospital has a bed count exceeding 100, which would indicate that the hospital is no longer a Medicare-dependent, small rural hospital according to the statutory criteria. Therefore, even if we were not merely codifying our existing policy, we would disagree with the commenter that CMS should modify its policy as the commenter requested.

After consideration of the public comments we received, for the reasons discussed above and in the proposed rule, we are finalizing as proposed, without modification, our codification of policies regarding multicampus hospitals in the regulations at § 412.92, § 412.96, and § 412.108. For the reason discussed in response to a comment above, we are finalizing our codification of policies regarding multicampus hospitals in the

regulation at § 412.103(a)(7) with modification to remove an inadvertent reference to § 412.103(a)(6) (which pertains to CAHs). We may further consider commenters' suggestions regarding appropriate modifications to our policies in future rulemaking.

#### E. Occupational Mix Adjustment to the FY 2019 Wage Index

As stated earlier, section 1886(d)(3)(E) of the Act provides for the collection of data every 3 years on the occupational mix of employees for each short-term, acute care hospital participating in the Medicare program, in order to construct an occupational mix adjustment to the wage index, for application beginning October 1, 2004 (the FY 2005 wage index). The purpose of the occupational mix adjustment is to control for the effect of hospitals' employment choices on the wage index. For example, hospitals may choose to employ different combinations of registered nurses, licensed practical nurses, nursing aides, and medical assistants for the purpose of providing nursing care to their patients. The varying labor costs associated with these choices reflect hospital management decisions rather than geographic differences in the costs of labor.

##### 1. Use of 2016 Medicare Wage Index Occupational Mix Survey for the FY 2019 Wage Index

Section 304(c) of the Consolidated Appropriations Act, 2001 (Pub. L. 106-554) amended section 1886(d)(3)(E) of the Act to require CMS to collect data every 3 years on the occupational mix of employees for each short-term, acute care hospital participating in the Medicare program. We collected data in 2013 to compute the occupational mix adjustment for the FY 2016, FY 2017, and FY 2018 wage indexes. As discussed in the

FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19903) and final rule (82 FR 38137), a new measurement of occupational mix is required for FY 2019.

The FY 2019 occupational mix adjustment is based on a new calendar year (CY) 2016 survey. Hospitals were required to submit their completed 2016 surveys (Form CMS-10079, OMB number 0938-0907) to their MACs by July 3, 2017. The preliminary, unaudited CY 2016 survey data were posted on the CMS website on July 12, 2017. As with the Worksheet S-3, Parts II and III cost report wage data, as part of the FY 2019 desk review process, the MACs revised or verified data elements in hospitals' occupational mix surveys that resulted in certain edit failures.

## 2. Calculation of the Occupational Mix Adjustment for FY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20361), for FY 2019, we proposed to calculate the occupational mix adjustment factor using the same methodology that we have used since the FY 2012 wage index (76 FR 51582 through 51586) and to apply the occupational mix adjustment to 100 percent of the FY 2019 wage index. Similar to the method we use for the calculation of the wage index without occupational mix, salaries and hours for a multicampus hospital are allotted among the different labor market areas where its campuses are located. Table 2 associated with this final rule (which is available via the Internet on the CMS website), which contains the final FY 2019 occupational mix adjusted wage index, includes separate wage data for the campuses of 16 multicampus hospitals. We refer readers to section III.C. of the preamble of this final rule for a chart listing the multicampus hospitals and the FTE percentages used to allot their occupational mix data.

Because the statute requires that the Secretary measure the earnings and paid hours of employment by occupational category not less than once every 3 years, all hospitals that are subject to payments under the IPPS, or any hospital that would be subject to the IPPS if not granted a waiver, must complete the occupational mix survey, unless the hospital has no associated cost report wage data that are included in the FY 2019 wage index. For the proposed FY 2019 wage index, we used the Worksheet S-3, Parts II and III wage data of 3,260 hospitals, and we used the occupational mix surveys of 3,078 hospitals for which we also have Worksheet S-3 wage data, which represented a “response” rate of 94 percent (3,078/3,260). For the proposed FY 2019 wage index, we applied proxy data for noncompliant hospitals, new hospitals, or hospitals that submitted erroneous or aberrant data in the same manner that we applied proxy data for such hospitals in the FY 2012 wage index occupational mix adjustment (76 FR 51586). As a result of applying this methodology, the proposed FY 2019 occupational mix adjusted national average hourly wage was \$42.948428861.

In summary, the proposed FY 2019 unadjusted national average hourly wage and the proposed FY 2019 occupational mix adjusted national average hourly wage were:

<b>Proposed Unadjusted National Average Hourly Wage</b>	<b>Proposed Occupational Mix Adjusted National Average Hourly Wage</b>
\$42.990625267	\$42.948428861

Comment: One commenter stated that all hospitals should be obligated to submit the occupational mix survey because failure to complete the survey jeopardizes the accuracy of the wage index. The commenter suggested that a penalty be instituted for nonsubmitters. This commenter also requested that, pending CMS’ analysis of the

Commuting Based Wage Index and given the Institute of Medicine's study on geographic variation in hospital wage costs, CMS eliminate the occupational mix survey and the significant reporting burden it creates. Another commenter believed that the substantial administrative burden imposed by the occupational mix adjustment has far exceeded whatever benefit it might have conferred.

Response: We appreciate the commenter's concern about the accuracy of the wage index. We have continually requested that all hospitals complete and submit the occupational mix surveys, although we did not establish a penalty for hospitals that did not submit the surveys. We did not establish a penalty for hospitals that did not submit the 2016 surveys. However, we are continuing to consider for future rulemaking various options for ensuring full compliance with future occupational mix surveys. Regarding the commenter's concern about the administrative burden of the occupational mix survey and the suggestion that we eliminate it, this survey is necessary to meet the provisions of section 1886(d)(3)(E) of the Act, which requires us to measure the earnings and paid hours of employment by occupational category.

After consideration of the public comments we received, for FY 2019, we are adopting as final our proposal to calculate the occupational mix adjustment factor using the same methodology that we have used since the FY 2012 wage index. For the final FY 2019 wage index, we used the Worksheet S-3, Parts II and III wage data of 3,283 hospitals, and we used the occupational mix surveys of 3,114 hospitals for which we also have Worksheet S-3 wage data, which is a "response" rate of 95 percent (3,114/3,283). (We note that the "response" rate for this final rule differs from that of the proposed rule

because for this final rule we have generally been able to include the occupational mix surveys of hospitals whose wage data were aberrant for the proposed rule but have since been improved and were used for this final rule. In addition, for this final rule, we have generally been able to include some occupational mix surveys that had been aberrant for the proposed rule but have since been improved and were used for this final rule.) For the final FY 2019 wage index, we applied proxy data for noncompliant hospitals, new hospitals, or hospitals that submitted erroneous or aberrant data in the same manner that we applied proxy data for such hospitals in the FY 2012 wage index occupational mix adjustment (76 FR 51586). As a result of applying this methodology, the final FY 2019 occupational mix adjusted national average hourly wage is \$42.955567020.

In summary, the final FY 2019 unadjusted national average hourly wage and the final FY 2019 occupational mix adjusted national average hourly wage are:

<b>Final Unadjusted National Average Hourly Wage</b>	<b>Final Occupational Mix Adjusted National Average Hourly Wage</b>
\$42.997789358	\$42.955567020

F. Analysis and Implementation of the Occupational Mix Adjustment and the FY 2019 Occupational Mix Adjusted Wage Index

As discussed in section III.E. of the preamble of this final rule, for FY 2019, we are applying the occupational mix adjustment to 100 percent of the FY 2019 wage index. We calculated the occupational mix adjustment using data from the 2016 occupational mix survey data, using the methodology described in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51582 through 51586). Using the occupational mix survey data and applying

the occupational mix adjustment to 100 percent of the FY 2019 wage index results in a national average hourly wage of \$42.955567020.

The FY 2019 national average hourly wages for each occupational mix nursing subcategory as calculated in Step 2 of the occupational mix calculation are as follows:

<b>Occupational Mix Nursing Subcategory</b>	<b>Average Hourly Wage</b>
National RN	\$41.66099188
National LPN and Surgical Technician	\$24.74107416
National Nurse Aide, Orderly, and Attendant	\$16.96864849
National Medical Assistant	\$18.13188525
National Nurse Category	\$35.04005228

The national average hourly wage for the entire nurse category as computed in Step 5 of the occupational mix calculation is \$35.04005228. Hospitals with a nurse category average hourly wage (as calculated in Step 4) of greater than the national nurse category average hourly wage receive an occupational mix adjustment factor (as calculated in Step 6) of less than 1.0. Hospitals with a nurse category average hourly wage (as calculated in Step 4) of less than the national nurse category average hourly wage receive an occupational mix adjustment factor (as calculated in Step 6) of greater than 1.0.

Based on the 2016 occupational mix survey data, we determined (in Step 7 of the occupational mix calculation) that the national percentage of hospital employees in the nurse category is 42.1 percent, and the national percentage of hospital employees in the all other occupations category is 57.9 percent. (We note that the percentage for this final rule differs from that of the proposed rule because we have recalculated this percentage based on the occupational mix data we have included for this final rule. That is, for this

final rule, we have generally been able to include the occupational mix surveys of hospitals whose wage data were aberrant for the proposed rule but have since been improved and were used for this final rule. In addition, for final rule we have generally been able to include some occupational mix surveys that had been aberrant for the proposed rule but have since been improved and were used for this final rule). At the CBSA level, the percentage of hospital employees in the nurse category ranged from a low of 26.6 percent in one CBSA to a high of 82.0 percent in another CBSA.

We compared the FY 2019 occupational mix adjusted wage indexes for each CBSA to the unadjusted wage indexes for each CBSA. As a result of applying the occupational mix adjustment to the wage data, the final wage index values for 233 (57.0 percent) urban areas and 23 (48.9 percent) rural areas increased. The final wage index values for 112 (27.4 percent) urban areas increased by greater than or equal to 1 percent but less than 5 percent, and the final wage index values for 8 (2.0 percent) urban areas increased by 5 percent or more. The final wage index values for 9 (19.1 percent) rural areas increased by greater than or equal to 1 percent but less than 5 percent, and no rural area's final wage index value increased by 5 percent or more. However, the final wage index values for 176 (43.0 percent) urban areas and 24 (51.1 percent) rural areas decreased. The final wage index values for 80 (19.6 percent) urban areas decreased by greater than or equal to 1 percent but less than 5 percent, and 1 urban area's final wage index value decreased by 5 percent or more. The final wage index values of 7 (14.9 percent) rural areas decreased by greater than or equal to 1 percent and less than 5 percent, and no rural areas' final wage index values decreased by 5 percent or more. The

largest final positive impacts are 6.49 percent for an urban area and 3.92 percent for a rural area. The largest final negative impacts are 5.85 percent for an urban area and 1.6 percent for a rural area. No urban area's final wage indexes and no rural area final wage indexes is unchanged by application of the occupational mix adjustment. These results indicate that a larger percentage of urban areas (57.0 percent) will benefit from the occupational mix adjustment than will rural areas (48.9 percent).

We also compared the FY 2019 wage data adjusted for occupational mix from the 2016 survey to the FY 2019 wage data adjusted for occupational mix from the 2013 survey. This analysis illustrates the effect on area wage indexes of using the 2016 survey data compared to the 2013 survey data; that is, it shows whether hospitals' wage indexes increased or decreased under the 2016 survey data as compared to the prior 2013 survey data. Of the 409 urban CBSAs and 47 rural CBSAs, our analysis shows that the FY 2019 wage index values for 228 (55.7 percent) urban areas and 23 (48.9 percent) rural areas increased using the 2016 survey data. Fifty-two (12.7 percent) urban areas increased by greater than or equal to 1 percent but less than 5 percent, and 3 (0.7 percent) urban areas increased by 5 percent or more. Seven (14.9 percent) rural areas increased by greater than or equal to 1 percent but less than 5 percent, and 0 rural areas increased by 5 percent or more. However, the wage index values for 181 (44.3 percent) urban areas and 24 (51.1 percent) rural areas decreased using the 2016 survey data. Forty nine (12.0 percent) urban areas decreased by greater than or equal to 1 percent but less than 5 percent, and 3 (0.7 percent) urban areas decreased by 5 percent or more. Two (4.3 percent) rural areas decreased by greater than or equal to 1 percent but less than 5 percent, and no rural areas

decreased by 5 percent or more. The largest positive impacts using the 2016 survey data compared to the 2013 survey data are 6.31 percent for an urban area and 4.71 percent for a rural area. The largest negative impacts are 14.32 percent for an urban area and 2.34 percent for rural areas. No urban areas and no rural areas are unaffected. These results indicate that the wage indexes of more CBSAs overall (55.0 percent) increased due to application of the 2016 occupational mix survey data as compared to the 2013 occupational mix survey data to the wage index. However, a larger percentage of urban areas (55.7 percent) benefitted from the use of the 2016 occupational mix survey data as compared to the 2013 occupational mix survey data than did rural areas (48.9 percent).

#### G. Application of the Rural, Imputed, and Frontier Floors

##### 1. Rural Floor

Section 4410(a) of Pub. L. 105–33 provides that, for discharges on or after October 1, 1997, the area wage index applicable to any hospital that is located in an urban area of a State may not be less than the area wage index applicable to hospitals located in rural areas in that State. This provision is referred to as the “rural floor.” Section 3141 of Pub. L. 111–148 also requires that a national budget neutrality adjustment be applied in implementing the rural floor. Based on the FY 2019 wage index associated with this final rule (which is available via the Internet on the CMS website), we estimate that 263 hospitals will receive an increase in their FY 2019 wage index due to the application of the rural floor.

## 2. Expiration of Imputed Floor Policy

In the FY 2005 IPPS final rule (69 FR 49109 through 49111), we adopted the “imputed floor” policy as a temporary 3-year regulatory measure to address concerns from hospitals in all-urban States that have argued that they are disadvantaged by the absence of rural hospitals to set a wage index floor for those States. Since its initial implementation, we have extended the imputed floor policy eight times, the last of which was adopted in the FY 2018 IPPS/LTCH PPS final rule and is set to expire on September 30, 2018. (We refer readers to further discussions of the imputed floor in the IPPS/LTCH PPS final rules from FY 2014 through FY 2018 (78 FR 50589 through 50590, 79 FR 49969 through 49970, 80 FR 49497 through 49498, 81 FR 56921 through 56922, and 82 FR 38138 through 38142, respectively) and to the regulations at 42 CFR 412.64(h)(4).) Currently, there are three all-urban States—Delaware, New Jersey, and Rhode Island—with a range of wage indexes assigned to hospitals in these States, including through reclassification or redesignation. (We refer readers to discussions of geographic reclassifications and redesignations in section III.I. of the preamble of this final rule.)

In computing the imputed floor for an all-urban State under the original methodology, which was established beginning in FY 2005, we calculated the ratio of the lowest-to-highest CBSA wage index for each all-urban State as well as the average of the ratios of lowest-to-highest CBSA wage indexes of those all-urban States. We then compared the State’s own ratio to the average ratio for all-urban States and whichever is higher is multiplied by the highest CBSA wage index value in the State—the product of

which established the imputed floor for the State. As of FY 2012, there were only two all-urban States—New Jersey and Rhode Island—and only New Jersey benefitted under this methodology. Under the previous OMB labor market area delineations, Rhode Island had only 1 CBSA (Providence-New Bedford-Fall River, RI-MA) and New Jersey had 10 CBSAs. Therefore, under the original methodology, Rhode Island's own ratio equaled 1.0, and its imputed floor was equal to its original CBSA wage index value. However, because the average ratio of New Jersey and Rhode Island was higher than New Jersey's own ratio, this methodology provided a benefit for New Jersey, but not for Rhode Island.

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53368 through 53369), we retained the imputed floor calculated under the original methodology as discussed above, and established an alternative methodology for computing the imputed floor wage index to address the concern that the original imputed floor methodology guaranteed a benefit for one all-urban State with multiple wage indexes (New Jersey) but could not benefit the other all-urban State (Rhode Island). The alternative methodology for calculating the imputed floor was established using data from the application of the rural floor policy for FY 2013. Under the alternative methodology, we first determined the average percentage difference between the post-reclassified, pre-floor area wage index and the post-reclassified, rural floor wage index (without rural floor budget neutrality applied) for all CBSAs receiving the rural floor. (Table 4D associated with the FY 2013 IPPS/LTCH PPS final rule (which is available via the Internet on the CMS website) included the CBSAs receiving a State's rural floor wage index.) The lowest post-reclassified wage

index assigned to a hospital in an all-urban State having a range of such values then is increased by this factor, the result of which establishes the State's alternative imputed floor. We amended § 412.64(h)(4) of the regulations to add paragraphs to incorporate the finalized alternative methodology, and to make reference and date changes. In summary, for the FY 2013 wage index, we did not make any changes to the original imputed floor methodology at § 412.64(h)(4) and, therefore, made no changes to the New Jersey imputed floor computation for FY 2013. Instead, for FY 2013, we adopted a second, alternative methodology for use in cases where an all-urban State has a range of wage indexes assigned to its hospitals, but the State cannot benefit under the original methodology.

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50589 through 50590), we extended the imputed floor policy (both the original methodology and the alternative methodology) for 1 additional year, through September 30, 2014, while we continued to explore potential wage index reforms.

In the FY 2015 IPPS/LTCH PPS final rule (79 FR 49969 through 49970), for FY 2015, we adopted a policy to extend the imputed floor policy (both the original methodology and alternative methodology) for another year, through September 30, 2015, as we continued to explore potential wage index reforms. In that final rule, we revised the regulations at § 412.64(h)(4) and (h)(4)(vi) to reflect the 1-year extension of the imputed floor. As discussed in section III.B. of the preamble of that FY 2015 final rule, we adopted the new OMB labor market area delineations beginning in FY 2015. Under the new OMB delineations, Delaware became an all-urban State,

along with New Jersey and Rhode Island. Under the new OMB delineations, Delaware has three CBSAs, New Jersey has seven CBSAs, and Rhode Island continues to have only one CBSA (Providence-Warwick, RI- MA). We refer readers to a detailed discussion of our adoption of the new OMB labor market area delineations in section III.B. of the preamble of the FY 2015 IPPS/LTCH PPS final rule. Therefore, under the adopted new OMB delineations discussed in section III.B. of the preamble of the FY 2015 IPPS/LTCH PPS final rule, Delaware became an all-urban State and was subject to an imputed floor as well for FY 2015.

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49497 through 49498), for FY 2016, we extended the imputed floor policy (under both the original methodology and the alternative methodology) for 1 additional year, through September 30, 2016. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56921 through 56922), for FY 2017, we extended the imputed floor policy (under both the original methodology and the alternative methodology) for 1 additional year, through September 30, 2017. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38138 through 38142), for FY 2018, we extended the imputed floor policy (under both the original methodology and the alternative methodology) for 1 additional year, through September 30, 2018. In these three final rules, we revised the regulations at § 412.64(h)(4) and (h)(4)(vi) to reflect the additional 1-year extensions.

The imputed floor is set to expire effective October 1, 2018, and in the FY 2019 proposed rule (83 FR 20363), we did not propose to extend the imputed floor policy. As we stated in the proposed rule (83 FR 20363), in the FY 2005 IPPS final rule

(69 FR 49110), we adopted the imputed floor policy for all-urban States under the authority of section 1886(d)(3)(E) of the Act, which gives the Secretary broad authority to adjust the proportion (as estimated by the Secretary from time to time) of hospitals' costs which are attributable to wages and wage-related costs of the DRG prospective payment rates for area differences in hospital wage levels by a factor (established by the Secretary). However, we explained in the proposed rule that we have expressed reservations about the establishment of an imputed floor, considering that the imputed rural floor methodology creates a disadvantage in the application of the wage index to hospitals in States with rural hospitals but no urban hospitals receiving the rural floor (72 FR 24786 and 72 FR 47322). As we discussed in the FY 2008 IPPS final rule (72 FR 47322), the application of the rural and imputed floors requires transfer of payments from hospitals in States with rural hospitals but where the rural floor is not applied to hospitals in States where the rural or imputed floor is applied. For this reason, in the FY 2019 proposed rule, we proposed not to apply an imputed floor to wage index calculations and payments for hospitals in all-urban States for FY 2019 and subsequent years. That is, we proposed that hospitals in New Jersey, Delaware, and Rhode Island (and in any other all-urban State) would receive a wage index that is calculated without applying an imputed floor for FY 2019 and subsequent years. Therefore, only States containing both rural areas and hospitals located in such areas (including any hospital reclassified as rural under the provisions of § 412.103 of the regulations) would benefit from the rural floor, in accordance with section 4410 of Pub. L. 105-33. In addition, we stated that we would no longer include the imputed floor as a factor in the national budget

neutrality adjustment. Therefore, the proposed wage index and impact tables associated with the FY 2019 IPPS/LTCH PPS proposed rule (which are available via the Internet on the CMS website) did not reflect the imputed floor policy, and there was no proposed national budget neutrality adjustment for the imputed floor for FY 2019.

Comment: Commenters supported CMS' proposal to allow the imputed floor policy to expire. Some commenters stated they have previously commented and continue to believe that the application of the imputed floor and the budget neutrality adjustment are an unfair redistribution of IPPS payments; they fully support the expiration of the imputed floor and the removal of the related budget neutrality adjustment.

A number of commenters stated that, under the current methodology, areas with few rural hospitals, such as Massachusetts, Arizona, and California, have the ability and incentive to have major urban hospitals reclassify as rural under 42 CFR 412.103 and, by selectively doing so, such an urban to rural reclassification could significantly raise the rural floor in those States. Commenters conveyed that while the establishment of a statewide rural floor is required by statute, the method by which the floor is calculated is entirely at CMS' discretion through regulatory authority and, in fact, CMS has already used its discretion in establishing the imputed rural floor for all-urban States. The commenters indicated that any rural floor calculation should mirror the spirit and intent of the law resulting in only the "natural" rural providers in a State considered when calculating a rural floor. Finally, the commenters suggested that CMS consider immediately issuing a change to the existing calculation that includes only the "natural" rural providers in calculating the rural floor for a State.

Response: We appreciate the commenters' support for the proposal not to extend the imputed floor. While it is not clear what is meant by "natural" rural providers, we assume that commenters meant providers physically located in a rural area (rather than providers with a rural reclassification). We appreciate the comments in regard to revisions to the rural floor methodology, including revising the calculation to be based only on providers that are physically located in rural areas, and not providers that are reclassified as rural. As described in the FY 2006 IPPS final rule (70 FR 47379), in our continued effort to promote consistency and equity and to simplify our rules with respect to how we construct the wage indexes of rural and urban areas, we were persuaded at that time that there was a need to modify our policy when hospital redesignations occur under section 1886(d)(8)(E) of the Act. One aspect of this discussion was the rule that the wage data of an urban hospital reclassifying into the rural area would be included in the rural area's wage index, if including the urban hospital's data increases the wage index of the rural area. Nevertheless, as we continue to evaluate ways to address wage index disparities, we will take these comments to revisit this policy into consideration.

Comment: Several commenters disagreed with the proposal to allow the imputed floor to expire, and stated that CMS should maintain the status quo, that is, continue extending the imputed floor for 1 year, until the entirety of Medicare wage index reform is complete. The commenters pointed out that CMS, in both the FY 2014 and FY 2015 IPPS final rules, extended the imputed floor for an additional year, during which time CMS stated that it would continue to explore potential wage index reform. However, the

commenter stated that such reform has not occurred and, therefore, it is premature to remove the imputed floor.

Response: Section 3137(b) of the Affordable Care Act required the Secretary of Health and Human Services to submit to Congress a report to reform the Medicare Wage Index applied under the IPPS. We submitted the Report to Congress on April 11, 2012, and posted the report and other information regarding wage index reform on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Reform.html>. While in past years we have stated that we continue to explore wage index reforms while extending the imputed floor in increments (for example, 78 FR 50589 through 50590 and 79 FR 49969 through 49970), we note that it has already been many years since the report was issued with no new legislation from Congress to comprehensively reform the wage index. With no such legislation from Congress, at this point, we do not find it appropriate to continue to tie the extension of the imputed floor to comprehensive wage index reform. Therefore, we disagree with the commenters that the imputed floor should be extended until such time as comprehensive wage index reform may be instituted. Furthermore, as noted by the recent request for information (RFI) in the proposed rule, we also are working to address wage index disparities. We believe that the elimination of the budget neutrality adjustment associated with the imputed floor, as also discussed below, is entirely consistent with our wage index disparities initiative.

Comment: Several commenters stated that, by eliminating the imputed floor wage index, CMS is alleviating only a fraction of the combined payment transfer from

the application of the rural and imputed floors. The commenters explained that combined, hospitals in the three all-urban States (New Jersey, Rhode Island, and Delaware) accounted for less than 10 percent of the 400 hospitals nationally that received either the rural or imputed floor last year. Therefore, the commenters believed that the imputed floor budget neutrality adjustment is not resulting in the significant transfer of payments from hospitals in States with rural hospitals to hospitals in States where the imputed floor is applied.

A number of commenters believed that eliminating the imputed floor would create the same uneven playing field in all-urban States that existed prior to 2005, in response to which CMS initially established the policy. According to the commenters, the anomaly originally cited by CMS (that is, that hospitals in all-urban States with predominant labor market areas do not have any type of protection, or “floor,” from declines in their wage index) would exist again if the imputed floor policy is discontinued.

In addition, the commenters stated that there are many Medicare payment programs that redirect scarce Medicare funding to a class of unique hospitals, and that not all States have hospitals that benefit from these programs. For example, according to the commenters, CMS makes payments to CAHs at a rate of 101 percent of their costs and States that do not have any CAHs do not benefit from this program. The commenters stated that while CAHs are paid outside the IPPS program, the dollars continue to come from a finite Medicare trust fund representing a transfer of payments from hospitals in

States without any CAHs into States with CAHs, similar to the transfer of payments CMS cites as its rationale to discontinue the imputed floor.

The commenters also pointed out that CMS has upheld the imputed floor for over a decade as a valuable method of maintaining equitable wage index protections for all-urban States consistent with those that exist for States with rural areas. The commenters referenced previous CMS justification for creating and extending the floor in previous years, such as all-urban States are at a disadvantage due to the absence of a rural floor policy and that, in New Jersey, “because there is no floor to protect those hospitals not located in the predominant labor market area from facing continued declines in their wage index, it becomes increasingly difficult for those hospitals to continue to compete for labor.”

Response: While, in the past, we have provided for temporary extensions of the imputed floor, we do not believe at this time it is appropriate to continue to extend the imputed floor. While the commenters raise concerns that, if the imputed floor were discontinued, hospitals in all-urban States would again be disadvantaged by the absence of rural hospitals to set a wage index floor for those States, as well as concerns about the financial impacts of discontinuing the rural floor, we have also expressed concerns about continuing the imputed floor policy. As we pointed out in the proposed rule (83 FR 20363), CMS has expressed reservations about the establishment of an imputed floor, considering that the imputed rural floor methodology creates a disadvantage in the application of the wage index to hospitals in States with rural hospitals but no urban hospitals receiving the rural floor. As we discussed in the FY 2008 IPPS/LTCH PPS

final rule (72 FR 47322), the FY 2012 IPPS/LTCH PPS final rule (76 FR 51593), the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19905), and the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20363), the application of the rural and imputed floors requires transfer of payments from hospitals in States with rural hospitals but where the rural floor is not applied to hospitals in States where the rural or imputed floor is applied. While the three all-urban States may count for a fraction of all States that received the rural and imputed floor last year, the imputed rural floor methodology still creates a disadvantage in the application of the wage index to hospitals in States with rural hospitals but no urban hospitals receiving the rural or imputed floor. Therefore, we do not believe it is appropriate to continue to extend the imputed floor.

Finally, regarding the comparison made by commenters between the CAH payment methodology and the imputed floor methodology with respect to the transfer of payments, we disagree with this comparison. Because there is no national budget neutrality requirement relating to CAH payments (as there is with the imputed floor methodology), there is no transfer of payments from hospitals in States without any CAHs to hospitals in States with CAHs, similar to that which exists as a result of the application of the imputed floor. Under sections 1814(l) and 1834(g) of the Act, payments made to CAHs for inpatient and outpatient services are generally based on 101 percent of the reasonable costs of the CAH in providing such services. Reasonable cost is defined in section 1861(v)(1)(A) of the Act and determined in accordance with the regulations under 42 CFR part 413.

Comment: Several commenters opposed the continued application of the nationwide rural floor budget neutrality adjustment as described in the proposed rule. The commenters discussed section 3141 of the Affordable Care Act which established a policy of national budget neutrality for the application of the rural and imputed floors to the Medicare wage index. The commenters stated that, coupled with the orchestrated conversion of a single facility in Massachusetts—Nantucket Cottage Hospital—from a CAH to an IPPS hospital, section 3141 of the Affordable Care Act allows hospitals to unfairly manipulate the Medicare payment system and reward hospitals in Massachusetts and a few other States at the expense of other hospitals across the nation. The commenters stated that the adverse consequences of nationwide rural floor budget neutrality have been recognized and commented upon by HHS, CMS, and many others over the past several years. The commenters stated that, until this policy is *corrected*, the Medicare wage index system cannot possibly accomplish its objective of ensuring that payments for the wage component of labor accurately reflect actual wage costs.

The commenters also pointed out that the inequity of this provision recently was highlighted in a March 2017 Office of Inspector General (OIG) report showing how a single hospital overreported dollars and underreported hours, driving up the average hourly wage. According to the commenters, the OIG estimated that this error resulted in more than \$133 million in Medicare overpayments to be paid to Massachusetts hospitals. The commenters urged CMS to use its regulatory authority to curtail the adverse effects of section 3141 of the Affordable Care Act and restore integrity to the hospital wage index system, and further encouraged CMS to publish the effects of the nationwide rural

floor on Medicare outpatient services in the proposed and final hospital outpatient prospective payment system payment and policy updates for CY 2019.

Response: We thank the commenters for their comments and recommendations regarding modifications to the hospital wage index. As we stated earlier, section 4410 of the BBA requires the application of the rural floor and section 3141 of the Affordable Care Act requires a uniform, national budget neutrality adjustment for the rural floor. We do not have authority to repeal or revise these laws.

Regarding the comment encouraging CMS to publish the effects of the nationwide rural floor on Medicare outpatient services in the proposed and final hospital outpatient prospective payment system payment and policy updates for CY 2019, we will take this comment into consideration and may address them in the development of future rulemaking.

Comment: Commenters also supported the alternative methodology for calculating the imputed rural floor in Rhode Island. According to commenters, the methodology has been used since FY 2013 and has been key for the State's hospitals and maintaining access to care for residents of Rhode Island. The commenters stated that the alternative methodology for calculating the imputed floor appropriately addresses a hospital wage index reclassification system that does not reflect Rhode Island's characteristics. The commenters further stated that the alternative methodology for calculating the imputed rural floor protects its hospitals from falling to some of the lowest payment rates in the country, at the same time while competing with some of the most highly reimbursed urban hospitals. The commenters stated that the anomaly originally

cited by CMS (that is, that hospitals in all-urban States with predominant labor market areas do not have any type of protection, or “floor,” from declines in their wage index) would exist again if the imputed floor policy were discontinued. The commenters stressed that the elimination of imputed floor will reduce hospital Medicare payments in Rhode Island by approximately \$28.6 million in FY 2019. The commenters explained that hospitals are among Rhode Island’s top employers and the impact of the discontinuation of this policy would adversely impact this important sector of Rhode Island’s economy. The commenters further noted that this loss of funding will put Rhode Island at a competitive disadvantage for recruiting and maintaining staff as hospitals in Rhode Island must compete with neighboring States, which are located just miles away and are benefitting from a much higher payment rate.

Response: While the commenters raised concerns that, if the imputed floor were discontinued, hospitals in all-urban States, including Rhode Island, would again be disadvantaged by the absence of rural hospitals to set a wage index floor for those States, as well as concerns about the financial impacts of discontinuing the imputed floor alternative methodology in Rhode Island, we also have expressed concerns about continuing the imputed floor policy. As we discussed in the FY 2008 IPPS/LTCH PPS final rule (72 FR 47322), the FY 2012 IPPS/LTCH PPS final rule (76 FR 51593), the FY 2018 IPPS/LTCH PPS final rule (82 FR 38138), and the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20363), the application of the imputed floor requires a transfer of payments from hospitals in States with rural hospitals but where the rural floor is not applied to hospitals in States where the imputed floor is applied. As discussed

previously, while Rhode Island and the two other all-urban States (Delaware and New Jersey) may count for a fraction of all States that received the rural and imputed floor last year, the application of the imputed rural floor methodology (both the original and alternative methodologies) still creates a disadvantage in the application of the wage index to hospitals in States with rural hospitals but no urban hospitals receiving the rural floor. Thus, we believe it is appropriate to let the imputed floor expire as scheduled on October 1, 2018.

After consideration of public comments received, for the reasons discussed above and in the proposed rule, we believe it is appropriate to allow the imputed floor to expire on its expiration date, September 30, 2018. Therefore, we are allowing the imputed floor to expire under both the original methodology and the alternative methodology on the date it is currently set to expire, September 30, 2018. As proposed, the wage index and impact tables associated with this FY 2019 IPPS/ LTCH PPS final rule (which are available on the Internet via the CMS website) do not reflect the imputed floor policy and we are not applying a national budget neutrality adjustment for the imputed floor for FY 2019. There are 10 hospitals in New Jersey, 9 hospitals in Rhode Island, and 3 hospitals in Delaware that will no longer receive an increase in their FY 2019 wage index due to the expiration of the imputed floor policy.

### 3. State Frontier Floor for FY 2019

Section 10324 of Pub. L. 111–148 requires that hospitals in frontier States cannot be assigned a wage index of less than 1.0000. (We refer readers to the regulations at 42 CFR 412.64(m) and to a discussion of the implementation of this provision in the

FY 2011 IPPS/LTCH PPS final rule (75 FR 50160 through 50161).) In the FY 2019 IPPS/LTCH PPS proposed rule, we did not propose any changes to the frontier floor policy for FY 2019. We stated in the proposed rule that 50 hospitals would receive the frontier floor value of 1.0000 for their FY 2019 wage index. These hospitals are located in Montana, Nevada, North Dakota, South Dakota, and Wyoming.

We did not receive any public comments on the application of the State frontier floor for FY 2019. In this final rule, 50 hospitals will receive the frontier floor value of 1.0000 for their FY 2019 wage index. These hospitals are located in Montana, Nevada, North Dakota, South Dakota, and Wyoming.

The areas affected by the final rural and frontier floor policies for the FY 2019 wage index are identified in Table 2 associated with this final rule, which is available via the Internet on the CMS website.

#### H. FY 2019 Wage Index Tables

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49498 and 49807 through 49808), we finalized a proposal to streamline and consolidate the wage index tables associated with the IPPS proposed and final rules for FY 2016 and subsequent fiscal years. Prior to FY 2016, the wage index tables had consisted of 12 tables (Tables 2, 3A, 3B, 4A, 4B, 4C, 4D, 4E, 4F, 4J, 9A, and 9C) that were made available via the Internet on the CMS website. Effective beginning FY 2016, with the exception of Table 4E, we streamlined and consolidated 11 tables (Tables 2, 3A, 3B, 4A, 4B, 4C, 4D, 4F, 4J, 9A, and 9C) into 2 tables (Tables 2 and 3). In addition, as discussed in section III.J. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, we added a Table 4 associated

with the proposed rule entitled “List of Counties Eligible for the Out-Migration Adjustment under Section 1886(d)(13) of the Act—FY 2019” (which is available via Internet on the CMS Website). We intend to make this information available annually via Table 4 in the IPPS/LTCH PPS proposed and final rules. We refer readers to section VI. of the Addendum to this final rule for a discussion of the final wage index tables for FY 2019.

#### I. Revisions to the Wage Index Based on Hospital Redesignations and Reclassifications

##### 1. General Policies and Effects of Reclassification and Redesignation

Under section 1886(d)(10) of the Act, the Medicare Geographic Classification Review Board (MGCRB) considers applications by hospitals for geographic reclassification for purposes of payment under the IPPS. Hospitals must apply to the MGCRB to reclassify not later than 13 months prior to the start of the fiscal year for which reclassification is sought (usually by September 1). Generally, hospitals must be proximate to the labor market area to which they are seeking reclassification and must demonstrate characteristics similar to hospitals located in that area. The MGCRB issues its decisions by the end of February for reclassifications that become effective for the following fiscal year (beginning October 1). The regulations applicable to reclassifications by the MGCRB are located in 42 CFR 412.230 through 412.280. (We refer readers to a discussion in the FY 2002 IPPS final rule (66 FR 39874 and 39875) regarding how the MGCRB defines mileage for purposes of the proximity requirements.) The general policies for reclassifications and redesignations and the policies for the effects of hospitals’ reclassifications and redesignations on the wage index are discussed

in the FY 2012 IPPS/LTCH PPS final rule for the FY 2012 final wage index (76 FR 51595 and 51596). In addition, in the FY 2012 IPPS/LTCH PPS final rule, we discussed the effects on the wage index of urban hospitals reclassifying to rural areas under 42 CFR 412.103. Hospitals that are geographically located in States without any rural areas are ineligible to apply for rural reclassification in accordance with the provisions of 42 CFR 412.103.

On April 21, 2016, we published an interim final rule with comment period (IFC) in the **Federal Register** (81 FR 23428 through 23438) that included provisions amending our regulations to allow hospitals nationwide to have simultaneous § 412.103 and MGCRB reclassifications. For reclassifications effective beginning FY 2018, a hospital may acquire rural status under § 412.103 and subsequently apply for a reclassification under the MGCRB using distance and average hourly wage criteria designated for rural hospitals. In addition, we provided that a hospital that has an active MGCRB reclassification and is then approved for redesignation under § 412.103 will not lose its MGCRB reclassification; such a hospital receives a reclassified urban wage index during the years of its active MGCRB reclassification and is still considered rural under section 1886(d) of the Act and for other purposes.

We discussed that when there is both a § 412.103 redesignation and an MGCRB reclassification, the MGCRB reclassification controls for wage index calculation and payment purposes. We exclude hospitals with § 412.103 redesignations from the calculation of the reclassified rural wage index if they also have an active MGCRB reclassification to another area. That is, if an application for urban reclassification

through the MGCRB is approved, and is not withdrawn or terminated by the hospital within the established timelines, we consider the hospital's geographic CBSA and the urban CBSA to which the hospital is reclassified under the MGCRB for the wage index calculation. We refer readers to the April 21, 2016 IFC (81 FR 23428 through 23438) and the FY 2017 IPPS/LTCH PPS final rule (81 FR 56922 through 56930) for a full discussion of the effect of simultaneous reclassifications under both the § 412.103 and the MGCRB processes on wage index calculations.

## 2. MGCRB Reclassification and Redesignation Issues for FY 2019

### a. FY 2019 Reclassification Requirements and Approvals

As previously stated, under section 1886(d)(10) of the Act, the MGCRB considers applications by hospitals for geographic reclassification for purposes of payment under the IPPS. The specific procedures and rules that apply to the geographic reclassification process are outlined in regulations under 42 CFR 412.230 through 412.280.

At the time this final rule was constructed, the MGCRB had completed its review of FY 2019 reclassification requests. Based on such reviews, there are 303 hospitals approved for wage index reclassifications by the MGCRB starting in FY 2019. Because MGCRB wage index reclassifications are effective for 3 years, for FY 2019, hospitals reclassified beginning in FY 2017 or FY 2018 are eligible to continue to be reclassified to a particular labor market area based on such prior reclassifications for the remainder of their 3-year period. There were 230 hospitals approved for wage index reclassifications in FY 2017 that will continue for FY 2019, and 348 hospitals approved for wage index reclassifications in FY 2018 that will continue for FY 2019. Of all the hospitals approved

for reclassification for FY 2017, FY 2018, and FY 2019, based upon the review at the time of this final rule, 881 hospitals are in a MGCRB reclassification status for FY 2019 (with 21 of these hospitals reclassified back to their geographic location).

Under the regulations at 42 CFR 412.273, hospitals that have been reclassified by the MGCRB are permitted to withdraw their applications if the request for withdrawal is received by the MGCRB any time before the MGCRB issues a decision on the application, or after the MGCRB issues a decision, provided the request for withdrawal is received by the MGCRB within 45 days of the date that CMS' annual notice of proposed rulemaking is issued in the **Federal Register** concerning changes to the inpatient hospital prospective payment system and proposed payment rates for the fiscal year for which the application has been filed. For information about withdrawing, terminating, or canceling a previous withdrawal or termination of a 3-year reclassification for wage index purposes, we refer readers to § 412.273, as well as the FY 2002 IPPS final rule (66 FR 39887 through 39888) and the FY 2003 IPPS final rule (67 FR 50065 through 50066). Additional discussion on withdrawals and terminations, and clarifications regarding reinstating reclassifications and "fallback" reclassifications were included in the FY 2008 IPPS final rule (72 FR 47333) and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38148 through 38150).

Changes to the wage index that result from withdrawals of requests for reclassification, terminations, wage index corrections, appeals, and the Administrator's review process for FY 2019 are incorporated into the wage index values published in this FY 2019 IPPS/LTCH PPS final rule. These changes affect not only the wage index value

for specific geographic areas, but also the wage index value that redesignated/reclassified hospitals receive; that is, whether they receive the wage index that includes the data for both the hospitals already in the area and the redesignated/reclassified hospitals. Further, the wage index value for the area from which the hospitals are redesignated/reclassified may be affected.

Comment: One commenter stated that CMS' policy that hospitals must request to withdraw or terminate MGCRB reclassifications within 45 days of the proposed rule is problematic because a hospital could terminate a reclassification based on information in the proposed rule and, with the publication of the final rule, discover that its original reclassified status was more desirable. The commenter stated that hospitals cannot make informed decisions concerning their reclassification status based on values in a proposed rule that are likely to change. Therefore, the commenter recommended that CMS revise its existing policy to permit hospitals to withdraw or terminate their reclassification status within 45 days after the publication of the final rule.

Response: We maintain that information provided in the proposed rule constitutes the best available data to assist hospitals in making reclassification decisions. In addition, section 1886(d)(8)(D) of the Act requires the Secretary to adjust the standardized amounts to ensure that aggregate payments under the IPPS after implementation of the provisions of certain sections of the Act, including section 1886(d)(10) of the Act for geographic reclassifications by the MGCRB, are equal to the aggregate prospective payments that would have been made absent these provisions. If hospitals were to withdraw or terminate reclassification statuses after the publication of

the final rule, as the commenter suggested CMS permit, any resulting changes in the wage index would not have been taken into account when calculating the IPPS standardized amounts in the final rule in accordance with the statutory budget neutrality requirement. Therefore, the values published in the final rule represent the final wage index values reflective of reclassification decisions.

Applications for FY 2020 reclassifications (OMB control number 0938-0573) are due to the MGCRB by September 4, 2018 (the first working day of September 2018). We note that this is also the deadline for canceling a previous wage index reclassification withdrawal, or termination under 42 CFR 412.273(d). Applications and other information about MGCRB reclassifications may be obtained, beginning in mid-July 2018, via the Internet on the CMS website at: <https://www.cms.gov/Regulations-and-Guidance/Review-Boards/MGCRB/index.html>, or by calling the MGCRB at (410) 786-1174. The mailing address of the MGCRB is: 1508 Woodlawn Drive, Suite 100, Baltimore, MD 21207.

Under regulations in effect prior to FY 2018 (42 CFR 412.256(a)(1)), applications for reclassification were required to be mailed or delivered to the MGCRB, with a copy to CMS, and were not allowed to be submitted through the facsimile (FAX) process or by other electronic means. Because we believed this previous policy was outdated and overly restrictive and to promote ease of application for FY 2018 and subsequent years, in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56928), we revised this policy to require applications and supporting documentation to be submitted via the method prescribed in instructions by the MGCRB, with an electronic copy to CMS. Specifically,

in the FY 2017 IPPS/LTCH PPS final rule, we revised § 412.256(a)(1) to specify that an application must be submitted to the MGCRB according to the method prescribed by the MGCRB, with an electronic copy of the application sent to CMS. We specified that CMS copies should be sent via email to [wageindex@cms.hhs.gov](mailto:wageindex@cms.hhs.gov).

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56928), we reiterated that MGCRB application requirements will be published separately from the rulemaking process, and paper applications will likely still be required. However, we note that, beginning with the FY 2020 reclassification application cycle, the MGCRB now requires applications, supporting documents, and subsequent correspondence to be filed electronically through the MGCRB module of the Office of Hearings Case and Document Management System (“OH CDMS”). Also, the MGCRB will issue all of its notices and decisions via email and these documents will be accessible electronically through OH CDMS. Registration instructions and the system user manual are available at <https://www.cms.gov/Regulations-and-Guidance/Review-Boards/MGCRB/Electronic-Filing.html>. The MGCRB makes all initial determinations for geographic reclassification requests, but CMS requests copies of all applications to assist in verifying a reclassification status during the wage index development process. We stated that we believed that requiring electronic versions would better aid CMS in this process, and would reduce the overall burden upon hospitals.

b. Revision of Reclassification Requirements for a Provider That Is the Sole Hospital in the MSA

Section 412.230 of the regulations sets forth criteria for an individual hospital to apply for geographic reclassification to a higher rural or urban wage index area. Specifically, under § 412.230(a)(1)(ii), an individual hospital may be redesignated from an urban area to another urban area, from a rural area to another rural area, or from a rural area to an urban area for the purpose of using the other area's wage index value. Such a hospital must also meet other criteria. One of these required criteria, under § 412.230(d)(1)(iii)(C), is that the hospital must demonstrate that its own average hourly wage is, in the case of a hospital located in a rural area, at least 106 percent, and in the case of a hospital located in an urban area, at least 108 percent of the average hourly wage of all other hospitals in the area in which the hospital is located. We refer readers to the FY 2009 IPPS/LTCH PPS final rule (73 FR 48568) for further explanation as to how the 108/106 percent average hourly wage standards were determined. In cases in which a hospital wishing to reclassify is the only hospital in its MSA, that hospital is unable to satisfy this criterion because it cannot demonstrate that its average hourly wage is higher than that of the other hospitals in the area in which the hospital is located (because there are no other hospitals in the area).

In the FY 2012 IPPS/LTCH PPS final rule (76 FR 51600 through 51601), we implemented a policy change to allow for a waiver of the average hourly wage comparison criterion under § 412.230(d)(1)(iii) for a hospital in a single hospital MSA for reclassifications beginning in FY 2013 if the hospital could document that it is the single hospital in its MSA that is paid under 42 CFR Part 412, subpart D (§ 412.230(d)(5)). In that final rule, we stated that we agreed that the then-current

policies for geographic reclassification were disparate for hospitals located in single hospital MSAs compared to hospitals located in multiple hospital MSAs. We also acknowledged commenters' views that this disparity was sometimes a disadvantage because hospitals in single hospital MSAs had fewer options for qualifying for geographic reclassification. As we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20365), in the years since we implemented this policy change, we have encountered questions and concerns regarding its implementation. In the proposed rule, we stated that to qualify under § 412.230(d)(5) for the waiver of the average hourly wage criterion under § 412.230(d)(1)(iii)(C), a hospital must document to the MGCRB that it is the only hospital in its geographic wage index area that is paid under 42 CFR Part 412, subpart D. We noted that to do so, a hospital frequently was required to contact the appropriate CMS Regional Office or MAC for a statement certifying its status as the single hospital in its MSA. We explained that hospitals have indicated that this process may be time-consuming, inconsistent in its application nationally, and poses challenges with respect to accurately reflecting situations where hospitals have recently opened or ceased operations during the application process. We stated in the proposed rule (83 FR 20365) that, in light of these questions and concerns and after reviewing the implementation of this reclassification provision, we believed that a revision of the policy was necessary to reduce unnecessary burden to affected hospitals and enhance consistency while achieving previously stated policy goals.

We explained in the proposed rule that the objective of the 108/106 percent average hourly wage criterion at § 412.230(d)(1)(iii)(C) is to require a reclassifying

hospital to document that it has significantly higher average hourly wages than other hospitals in its labor market area. The stated purpose of § 412.230(d)(5) was to provide additional reclassification options for hospitals that, due to their single hospital MSA status, could not mathematically meet the requirements of § 412.230(d)(1)(iii).

Therefore, in order to determine whether a hospital is the single hospital in the MSA under § 412.230(d)(5), rather than require the hospital to obtain documentation from the CMS Regional Office or the MAC to prove its single hospital MSA status, we stated that we believe it would be appropriate to use the same data used to determine whether the 108/106 percent criterion is met under § 412.230(d)(1)(iii)(C): that is, the annually published 3-year average hourly wage data as provided in § 412.230(d)(2)(ii).

Specifically, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20365), we proposed that, for reclassification applications for FY 2021 and subsequent fiscal years, a hospital would provide the wage index data from the current year's IPPS final rule to demonstrate that it is the only hospital in its labor market area with wage data listed within the 3-year period considered by the MGCRB. Accordingly, we proposed to revise the regulation text at § 412.230(d)(5) to provide that the requirements of § 412.230(d)(1)(iii) would not apply if a hospital is the single hospital in its MSA with published 3-year average hourly wage data included in the current fiscal year inpatient prospective payment system final rule. In proposing this revision, we stated that we would remove the language in this regulation requiring that the hospital be the single hospital "paid under subpart D of this part", as we believe the proposed revisions to the regulation above more accurately identify the universe of hospitals this policy was intended to address.

As discussed in the proposed rule, the purpose of the single hospital MSA provision was to address situations where a hospital essentially had no means of comparing wages to other hospitals in its labor market area. We stated in the proposed rule that we believe this proposal would allow for a more straightforward and consistent implementation of the single hospital MSA exception and would reduce provider burden. We further stated that we believe the proposed requirements above for meeting the single hospital MSA exception could be easily verified and validated by the applicant and the MGCRB, and would continue to address the concerns expressed by commenters included in the FY 2012 IPPS/LTCH PPS final rule.

Comment: A number of commenters supported the proposal.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, for the reasons discussed above and in the proposed rule, we are finalizing our revisions to § 412.230(d)(5) as proposed without modification. Thus, for applications for reclassification for FY 2021 and subsequent fiscal years, a hospital must provide the wage index data from the current year's IPPS final rule to demonstrate that it is the only hospital in its labor market area with wage data listed within the 3-year period considered by the MGCRB. Specifically, a hospital must provide documentation from Table 2 of the Addendum to the current fiscal year IPPS/LTCH PPS final rule demonstrating it is the only CCN listed within the associated "Geographic CBSA" number (currently listed under column H) with a "3-Year Average Hourly Wage (2018, 2019, 2020)" value (currently listed under column G).

c. Clarification of Group Reclassification Policies for Multicampus Hospitals

Under current policy described in §§ 412.230(d)(2)(v), 412.232(d)(2)(iii), and 412.234(c)(2), and as discussed in the FY 2008 IPPS/LTCH final rule (72 FR 47334 through 47335), remote locations of hospitals in a distinct geographic area from the main hospital campus are eligible to seek wage index reclassification. As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20366), in Table 2 associated with that proposed rule (which is available via the Internet on the CMS website), such locations are indicated with a “B” in the third digit of the CCN. (As discussed in section III.C. of the preamble of that proposed rule (83 FR 20366), in past years, the “B” was instead placed in the fourth digit.) When CMS initially includes such a “B” hospital location in Table 2 for a particular fiscal year, it signifies that, for wage index purposes, the hospital indicated the presence of a remote location in a distinct geographic area on Worksheet S-2 of the cost report used to construct that current fiscal year’s wage index, and hours and wages were allocated between the main campus and the remote location. For billing purposes, these “B” locations are assigned their own area wage index value, separate from the main hospital campus. Hospitals are eligible to seek both individual and county group reclassifications for these “B” locations through the MGCRB, using the wage data published for the most recent IPPS final rule for the “B” location. While we are not proposing any change to the multicampus hospital reclassification policy, it has come to our attention that the MGCRB has had difficulty processing certain county group reclassification applications that include multicampus locations that have not yet been assigned a “B” number in Table 2. Typically, this would occur when an inpatient hospital location has recently been opened or acquired, creating a new “B” location.

Because the wage index development process utilizes cost reports that end up to 4 years prior to the upcoming IPPS fiscal year, the most recently published wage data for the hospital used to construct the wage index would not reflect the specific wage data for any new “B” location in a different labor market area. However, as specified in §§ 412.232(a)(2) and 412.234(a)(1) of the regulations, for county group reclassification applications, all hospitals in a county must apply for reclassification as a group. Thus, in order for hospitals in a county to obtain reclassification as a group, these new “B” locations are required under these regulations to be a party to any county group reclassification application, despite not having wage data published in Table 2. In a group reclassification involving a new “B” location, the “B” location would not yet have data included in the CMS hospital survey used to construct the wage index and to evaluate reclassification requests, and the most recently published wage data of the main hospital would encompass a time period well before the creation or acquisition of the new remote location. Therefore, the hospital could not submit composite average hourly wage data for the “B” location with the county group reclassification application. Because the county group reclassification application must list all active hospitals located in the county of the hospital group, including any “B” locations, if a “B” number is not listed in Table 2 associated with the IPPS final rule used to evaluate reclassification criteria, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20366), we requested that the county hospital group submit the application listing the remote location with a “B” in the third digit of the hospital’s CCN to help facilitate the MGCRB’s review. We stated in the proposed rule that if the county group reclassification is approved by the MGCRB, CMS

will include the hospital's "B" location in Table 2 of the subsequent IPPS final rule, and will instruct the MAC to adjust the payment for that remote location to the appropriate reclassified area. This "B" location designation would be included in subsequent rules, without composite wage data, until a time when the wage data of the new location are included in the cost report used to construct the wage index in effect for IPPS purposes, and a proper allocation can be determined.

We did not receive any public comments specific to this clarification and request. Therefore, when a county group MGCRB reclassification includes a remote location of a hospital located in a different labor market area that has not yet been assigned a "B" number in Table 2 of the applicable IPPS final rule used to evaluate reclassification criteria, to help facilitate the MGCRB's review, the county group should submit the application to the MGCRB listing the remote location with a "B" in the third digit of its CCN. If the application is approved by the MGCRB, CMS will include the "B" location number, with applicable reclassification status and wage index values, in Table 2 of the subsequent IPPS final rule.

### 3. Redesignations under Section 1886(d)(8)(B) of the Act

In the FY 2012 IPPS/LTCH PPS final rule (76 FR 51599 through 51600), we adopted the policy that, beginning with FY 2012, an eligible hospital that waives its Lugar status in order to receive the out-migration adjustment has effectively waived its deemed urban status and, thus, is rural for all purposes under the IPPS effective for the fiscal year in which the hospital receives the out-migration adjustment. In addition, in that rule, we adopted a minor procedural change that would allow a Lugar hospital that

qualifies for and accepts the out-migration adjustment (through written notification to CMS within 45 days from the publication of the proposed rule) to waive its urban status for the full 3-year period for which its out-migration adjustment is effective. By doing so, such a Lugar hospital would no longer be required during the second and third years of eligibility for the out-migration adjustment to advise us annually that it prefers to continue being treated as rural and receive the out-migration adjustment. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56930), we again clarified that such a request to waive Lugar status, received within 45 days of the publication of the proposed rule, is valid for the full 3-year period for which the hospital's out-migration adjustment is effective. We further clarified that if a hospital wishes to reinstate its urban status for any fiscal year within this 3-year period, it must send a request to CMS within 45 days of publication of the proposed rule for that particular fiscal year. We indicated that such reinstatement requests may be sent electronically to [wageindex@cms.hhs.gov](mailto:wageindex@cms.hhs.gov). In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38147 through 38148), we finalized a policy revision to require a Lugar hospital that qualifies for and accepts the out-migration adjustment, or that no longer wishes to accept the out-migration adjustment and instead elects to return to its deemed urban status, to notify CMS within 45 days from the date of public display of the proposed rule at the Office of the Federal Register. These revised notification timeframes were effective beginning October 1, 2017. In addition, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38148), we clarified that both requests to waive and to reinstate "Lugar" status may be sent to [wageindex@cms.hhs.gov](mailto:wageindex@cms.hhs.gov). To ensure proper

accounting, we request hospitals to include their CCN, and either “waive Lugar” or “reinstate Lugar”, in the subject line of these requests.

Comment: One comment addressed an issue currently under litigation regarding counties that qualify for redesignation under section 1886(d)(8)(B) of the Act, also known as Lugar counties. The commenter, legal counsel for the hospital that is a party in the litigation, stated that, based on total commuting rates to all counties within a CBSA, under section 1886(d)(8)(B) of the Act, the hospital--which qualifies for redesignation--should be assigned to a different CBSA than it is currently assigned. The commenter also stated that the hospital considers its current assignment to be a clerical error.

Response: In the FY 2019 IPPS/LTCH PPS proposed rule, we did not propose any changes to the list of qualified counties or the commuting standards used to redesignate Lugar counties to another CBSA. As we explained in the FY 2015 IPPS/LTCH PPS final rule, the list of counties that qualified for redesignation under section 1886(d)(8)(B) of the Act and their assignments were determined based on updated OMB delineations and Census data (79 FR 49978, which states that we “proposed to use the new OMB delineations to identify rural counties that would qualify as ‘Lugar’ under section 1886(d)(8)(B) of the Act and, therefore, would be redesignated to urban areas for FY 2015. . . . We did not receive any other specific comments with regard to our proposal to use the new OMB delineations to identify rural counties that would qualify as ‘Lugar’ under section 1886(d)(8)(B) of the Act. Therefore, we are finalizing the policy as proposed.”). The FY 2019 IPPS/LTCH PPS proposed rule used

the methodology adopted in the FY 2015 IPPS/LTCH PPS final rule (and subsequent final rules) to make the Lugar determinations and designations.

The proposed Lugar assignment of the hospital at issue for FY 2019 is not a clerical error. Under OMB's standards for determining whether an outlying county should be considered part of a CBSA, OMB examines commuting to central counties of the CBSA. Our longstanding policy is that, consistent with OMB standards, we examine commuting data to central counties of CBSAs in determining whether a hospital qualifies as a Lugar hospital and in determining the urban area to which it is assigned; we do not view the two steps in isolation. The proposed Lugar assignment of the hospital at issue for FY 2019 reflects proper application of this policy.

#### J. Out-Migration Adjustment Based on Commuting Patterns of Hospital Employees

In accordance with section 1886(d)(13) of the Act, as added by section 505 of Pub. L. 108–173, beginning with FY 2005, we established a process to make adjustments to the hospital wage index based on commuting patterns of hospital employees (the “out-migration” adjustment). The process, outlined in the FY 2005 IPPS final rule (69 FR 49061), provides for an increase in the wage index for hospitals located in certain counties that have a relatively high percentage of hospital employees who reside in the county but work in a different county (or counties) with a higher wage index.

Section 1886(d)(13)(B) of the Act requires the Secretary to use data the Secretary determines to be appropriate to establish the qualifying counties. When the provision of section 1886(d)(13) of the Act was implemented for the FY 2005 wage index, we analyzed commuting data compiled by the U.S. Census Bureau that were derived from a

special tabulation of the 2000 Census journey-to-work data for all industries (CMS extracted data applicable to hospitals). These data were compiled from responses to the “long-form” survey, which the Census Bureau used at that time and which contained questions on where residents in each county worked (69 FR 49062). However, the 2010 Census was “short form” only; information on where residents in each county worked was not collected as part of the 2010 Census. The Census Bureau worked with CMS to provide an alternative dataset based on the latest available data on where residents in each county worked in 2010, for use in developing a new out-migration adjustment based on new commuting patterns developed from the 2010 Census data beginning with FY 2016.

To determine the out-migration adjustments and applicable counties for FY 2016, we analyzed commuting data compiled by the Census Bureau that were derived from a custom tabulation of the American Community Survey (ACS), an official Census Bureau survey, utilizing 2008 through 2012 (5-year) Microdata. The data were compiled from responses to the ACS questions regarding the county where workers reside and the county to which workers commute. As we discussed in the FYs 2016, 2017, and 2018 IPPS/LTCH PPS final rules (80 FR 49501, 81 FR 56930, and 82 FR 38150, respectively), the same policies, procedures, and computation that were used for the FY 2012 out-migration adjustment were applicable for FY 2016, FY 2017, and FY 2018, and in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20367), we proposed to use them again for FY 2019. We have applied the same policies, procedures, and computations since FY 2012, and we believe they continue to be appropriate for FY 2019. We refer

readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49500 through 49502) for a full explanation of the revised data source.

For FY 2019, the out-migration adjustment will continue to be based on the data derived from the custom tabulation of the ACS utilizing 2008 through 2012 (5-year) Microdata. For future fiscal years, we may consider determining out-migration adjustments based on data from the next Census or other available data, as appropriate. For FY 2019, we did not propose any changes to the methodology or data source that we used for FY 2016 (81 FR 25071). (We refer readers to a full discussion of the out-migration adjustment, including rules on deeming hospitals reclassified under section 1886(d)(8) or section 1886(d)(10) of the Act to have waived the out-migration adjustment, in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51601 through 51602).)

We did not receive any public comments on this proposed policy for FY 2019. Therefore, for FY 2019, we are finalizing our proposal, without modification, to continue using the same policies, procedures, and computation that were used for the FY 2012 out-migration adjustment and that were applicable for FY 2016, FY 2017, and FY 2018.

Table 2 associated with this final rule (which is available via the Internet on the CMS website) includes the final out-migration adjustments for the FY 2019 wage index. In addition, as discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20367), we have added a new Table 4, “List of Counties Eligible for the Out-Migration Adjustment under Section 1886(d)(13) of the Act—FY 2019”, associated with this final rule. For this final rule, Table 4 consists of the following: a list of counties that are eligible for the out-migration adjustment for FY 2019 identified by FIPS county code, the

final FY 2019 out-migration adjustment, and the number of years the adjustment will be in effect. We believe this new table makes this information more transparent and provides the public with easier access to this information. We intend to make the information available annually via Table 4 in the IPPS/LTCH PPS proposed and final rules, and are including it among the tables associated with this FY 2019 IPPS/LTCH PPS final rule that are available via the Internet on the CMS website.

K. Reclassification from Urban to Rural under Section 1886(d)(8)(E) of the Act, Implemented at 42 CFR 412.103, and Change to Lock-In Date

Under section 1886(d)(8)(E) of the Act, a qualifying prospective payment hospital located in an urban area may apply for rural status for payment purposes separate from reclassification through the MGCRB. Specifically, section 1886(d)(8)(E) of the Act provides that, not later than 60 days after the receipt of an application (in a form and manner determined by the Secretary) from a subsection (d) hospital that satisfies certain criteria, the Secretary shall treat the hospital as being located in the rural area (as defined in paragraph (2)(D)) of the State in which the hospital is located. We refer readers to the regulations at 42 CFR 412.103 for the general criteria and application requirements for a subsection (d) hospital to reclassify from urban to rural status in accordance with section 1886(d)(8)(E) of the Act. The FY 2012 IPPS/LTCH PPS final rule (76 FR 51595 through 51596) includes our policies regarding the effect of wage data from reclassified or redesignated hospitals.

Hospitals must meet the criteria to be reclassified from urban to rural status under § 412.103, as well as fulfill the requirements for the application process. There may be

one or more reasons that a hospital applies for the urban to rural reclassification, and the timeframe that a hospital submits an application is often dependent on those reason(s). Because the wage index is part of the methodology for determining the prospective payments to hospitals for each fiscal year, we stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56931) that we believed there should be a definitive timeframe within which a hospital should apply for rural status in order for the reclassification to be reflected in the next Federal fiscal year's wage data used for setting payment rates.

Therefore, after notice of proposed rulemaking and consideration of public comments, in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56931 through 56932), we revised § 412.103(b) by adding paragraph (6) to specify that, in order for a hospital to be treated as rural in the wage index and budget neutrality calculations under § 412.64(e)(1)(ii), (e)(2), (e)(4), and (h) for payment rates for the next Federal fiscal year, the hospital's filing date (the lock-in date) must be no later than 70 days prior to the second Monday in June of the current Federal fiscal year and the application must be approved by the CMS Regional Office in accordance with the requirements of § 412.103. We refer readers to the FY 2017 IPPS/LTCH PPS final rule for a full discussion of this policy.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20367 through 20368), we proposed to change the lock-in date to provide for additional time in the ratesetting process and to match the lock-in date with another existing deadline. As we discussed in the FY 2017 IPPS/LTCH PPS proposed and final rules (81 FR 25071 and 56931, respectively), the IPPS ratesetting process that CMS undergoes each proposed and final

rulemaking is complex and labor-intensive, and subject to a compressed timeframe in order to issue the final rule each year within the timeframes for publication. Accordingly, CMS must ensure that it receives, in a timely fashion, the necessary data, including, but not limited to, the list of hospitals that are reclassified from urban to rural status under § 412.103, in order to calculate the wage indexes and other IPPS rates.

In order to allot more time to the ratesetting process, we proposed to revise the lock-in date such that a hospital's application for rural reclassification under § 412.103 must be approved by the CMS Regional Office no later than 60 days after the public display date of the IPPS notice of proposed rulemaking at the Office of the Federal Register in order for a hospital to be treated as rural in the wage index and budget neutrality calculations under § 412.64(e)(1)(ii), (e)(2), (e)(4), and (h) for payment rates for the next Federal fiscal year. We stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20368) that depending on the public display date of the proposed rule (which may be earlier in future years), this proposed revision to the lock-in date would potentially allow for additional time in the ratesetting process for CMS to incorporate rural reclassification data, which we believe would support efforts to eliminate errors and assist in ensuring a more accurate wage index.

As we stated in the proposed rule, under this revision, there would no longer be a requirement that the hospital file its rural reclassification application by a specified date (which at the time of the proposed rule was 70 days prior to the second Monday in June). While we stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56930 through 56932) that a hospital would need to file its reclassification application with the CMS Regional

Office not later than 70 days prior to the second Monday in June, we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20368) that timeframe was a precautionary measure to ensure that CMS would receive the approval in time to include the reclassified hospitals in the wage index and budget neutrality calculations for the upcoming Federal fiscal year (60 days for the CMS Regional Office to approve an application, in accordance with § 412.103(c), and an additional 10 days to process the approval and notify CMS Central Office). We explained that while we still believe that it would be prudent for hospitals to apply approximately 70 days prior to the proposed lock-in date, we believe that requiring hospitals to apply by a set date is unnecessary because the Regional Offices may approve a hospital's request to reclassify under § 412.103 in less than 60 days, and CMS may be notified in a timeframe shorter than 10 days. Therefore, we stated that, under our proposal, any hospital with an approved rural reclassification by the lock-in date proposed above (that is, 60 days after the public display date of the IPPS notice of proposed rulemaking at the Office of the Federal Register) would be included in the wage index and budget neutrality calculations for setting payment rates for the next Federal fiscal year, regardless of the date of filing.

In addition, we noted that CMS generally provides 60 days after the public display date of the IPPS notice of proposed rulemaking at the Office of the Federal Register for submitting public comments regarding the proposed rule for consideration in the final rule. Therefore, we believe that, in addition to providing for more time in the ratesetting process, which helps to ensure a more accurate wage index, this proposed revision would also provide clarity and simplify regulations by synchronizing the lock-in

date for § 412.103 redesignations with the usual public comment deadline for the IPPS proposed rule.

Accordingly, we proposed to revise § 412.103(b)(6) to specify that in order for a hospital to be treated as rural in the wage index and budget neutrality calculations under § 412.64(e)(1)(ii), (e)(2), (e)(4), and (h) for payment rates for the next Federal fiscal year, the hospital's application must be approved by the CMS Regional Office in accordance with the requirements of § 412.103 no later than 60 days after the public display date at the Office of the Federal Register of the IPPS proposed rule for the next Federal fiscal year.

We also reiterated in the proposed rule that the lock-in date does not affect the timing of payment changes occurring at the hospital-specific level as a result of reclassification from urban to rural under § 412.103. As we discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56931), this lock-in date also does not change the current regulation that allows hospitals that qualify under § 412.103(a) to request, at any time during a cost reporting period, to reclassify from urban to rural. A hospital's rural status and claims payment reflecting its rural status continue to be effective on the filing date of its reclassification application, which is the date the CMS Regional Office receives the application, in accordance with § 412.103(d). The hospital's IPPS claims will be paid reflecting its rural status beginning on the filing date (the effective date) of the reclassification, regardless of when the hospital applies.

Comment: One commenter stated that there is ambiguity regarding the lock-in date at § 412.103(b)(6) because the lock-in date currently references the "filing date,"

which under the regulations at § 412.103(b)(5) is the date CMS receives the application. The commenter then maintained that the date the CMS mailroom receives the application may not necessarily be the date the CMS Regional Office recognizes as the filing date and ultimately when the provider receives rural status. The commenter requested that CMS clarify the filing date at § 412.103(b)(5) and simplify the regulations so that there is not a “hard and fast” deadline which can lead to an “inaccurate” wage index in the event of a discrepancy between the dates when the CMS mailroom and the CMS division responsible for processing rural reclassifications receive an application.

Response: We appreciate the commenter’s request for CMS to simplify the regulations. Under this proposed change to the lock-in date, we are simplifying the regulations by eliminating the requirement for a hospital to file its rural reclassification application by a specified date. We are reiterating that, under our proposal, any hospital with an approved rural reclassification by the lock-in date proposed above (that is, 60 days after the public display date of the IPPS notice of proposed rulemaking at the Office of the Federal Register) would be treated as rural in the wage index and budget neutrality calculations for setting payment rates for the next Federal fiscal year, regardless of the date of filing. Because our proposal to change the lock-in date would eliminate the reference to the “filing date” in § 412.103(b)(6), we believe our proposal addresses the commenter’s concern regarding the use of this term in § 412.103(b)(6). We appreciate the comment and may consider the commenter’s suggestion to clarify the use of this term in § 412.103(b)(5) in future rulemaking.

Comment: One commenter encouraged efforts to make sure that information is available to CMS timely for purposes of setting wage index values in the final rule, but expressed concern with CMS proposing to replace a “provider-based deadline” of 70 days prior to the second Monday in June with a “CMS Regional Office deadline” of a decision made no later than 60 days after the public display date of the proposed rule, because providers are not in control of CMS Regional Office timing. The commenter stated that providers also do not have a specific date upon which to rely for the public display of the proposed rule each year; therefore, a provider-based deadline based on that date would have to be after the display date. The commenter further pointed out that, using the FY 2019 proposed rule as an example, it appears the proposed change would not make the data available to CMS sooner because 60 days after the public display date of the proposed rule (June 25, 2018) was after the second Tuesday in June (June 12, 2018). The commenter asked that CMS set a specific provider deadline to permit the same 70 days as the current rule (60 days for CMS Regional Office processing, and 10 days for transmission) and recommended that CMS establish a single, fixed date for submission of approved applications by the CMS Regional Office to the CMS Central Office in order to adequately inform all involved parties of expectations with regard to these applications.

Response: We appreciate the commenter’s encouragement of efforts to make sure that information is available to CMS timely for purposes of setting wage index values in the final rule. While we agree that providers are not in control of CMS Regional Office timing, applications for urban to rural reclassification under § 412.103 may be submitted

at any time and providers are aware that, in accordance with § 412.103(c), the CMS Regional Office may take up to 60 days to approve an application. Therefore, providers seeking to be considered rural for the wage index and budget neutrality calculations can plan accordingly to submit applications for urban to rural reclassification with ample time for the application to be approved before the proposed lock-in date. Furthermore, we believe that eliminating a “provider-based deadline” benefits providers because a hospital that is approved for rural reclassification within 60 days of the public display date of the proposed rule would be included as rural in the final rule ratesetting even if the hospital filed less than 70 days prior to the lock-in date. We agree with the commenter that a provider-based deadline based on the date of the public display of the proposed rule, such as a requirement for a provider to file an application 70 days prior to 60 days after the display of the proposed rule, would not be practicable because providers do not have a specific date upon which to rely for the public display of the proposed rule each year. Therefore, we do not believe that CMS should set such a provider-based deadline to permit the same 70 days as the current rule. We also agree with the commenter that, using the FY 2019 proposed rule as an example, the proposed change would not have made the data available earlier than under the current policy, but we reiterate that the proposed rule may be displayed earlier in future years, which would potentially allot for more time in the ratesetting process. Therefore, we believe that it would be appropriate to revise the lock-in date as we proposed. Finally, we do not believe it is necessary to establish a single, fixed date for submission of approved applications by the CMS Regional Office to the CMS Central Office in order to adequately inform all involved

parties of expectations with regard to these applications because CMS Regional Offices already have the requirement at § 412.103(c) to rule on an application within 60 days, and the CMS Central Office is copied on such approvals.

After consideration of the public comments we received, for the reasons discussed above and in the proposed rule, we are finalizing our proposal, without modification, to revise § 412.103(b)(6) to specify that in order for a hospital to be treated as rural in the wage index and budget neutrality calculations under § 412.64(e)(1)(ii), (e)(2), (e)(4), and (h) for payment rates for the next Federal fiscal year, the hospital's application must be approved by the CMS Regional Office in accordance with the requirements of § 412.103 no later than 60 days after the public display date at the Office of the Federal Register of the IPPS proposed rule for the next Federal fiscal year.

#### L. Process for Requests for Wage Index Data Corrections

##### 1. Process for Hospitals to Request Wage Index Data Corrections

The preliminary, unaudited Worksheet S-3 wage data files for the proposed FY 2019 wage index were made available on May 19, 2017, and the preliminary CY 2016 occupational mix data files were made available on July 12, 2017, through the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Files-Items/FY-2019-Wage-Index-Home-Page.html>.

On February 2, 2018, we posted a public use file (PUF) at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Files-Items/FY-2019-Wage-Index-Home->

[Page.html](#) containing FY 2019 wage index data available as of February 1, 2018. This PUF contains a tab with the Worksheet S-3 wage data (which includes Worksheet S-3, Parts II and III wage data from cost reporting periods beginning on or after October 1, 2014 through September 30, 2015; that is, FY 2015 wage data), a tab with the occupational mix data (which includes data from the CY 2016 occupational mix survey, Form CMS-10079), a tab containing the Worksheet S-3 wage data of hospitals deleted from the February 2, 2018 wage data PUF, and a tab containing the CY 2016 occupational mix data of the hospitals deleted from the February 2, 2018 occupational mix PUF. In a memorandum dated December 14, 2017, we instructed all MACs to inform the IPPS hospitals that they service of the availability of the February 2, 2018 wage index data PUFs, and the process and timeframe for requesting revisions in accordance with the FY 2019 Wage Index Timetable.

In the interest of meeting the data needs of the public, beginning with the proposed FY 2009 wage index, we post an additional PUF on the CMS website that reflects the actual data that are used in computing the proposed wage index. The release of this file does not alter the current wage index process or schedule. We notify the hospital community of the availability of these data as we do with the current public use wage data files through our Hospital Open Door Forum. We encourage hospitals to sign up for automatic notifications of information about hospital issues and about the dates of the Hospital Open Door Forums at the CMS Web site at: <http://www.cms.gov/Outreach-and-Education/Outreach/OpenDoorForums/index.html>.

In a memorandum dated April 28, 2017, we instructed all MACs to inform the IPPS hospitals that they service of the availability of the preliminary wage index data files posted on May 19, 2017, and the process and timeframe for requesting revisions. The preliminary CY 2016 occupational mix survey data was posted on CMS' website on July 12, 2017.

If a hospital wished to request a change to its data as shown in the May 19, 2017 preliminary wage data files and the July 12, 2017 preliminary occupational mix data files, the hospital had to submit corrections along with complete, detailed supporting documentation to its MAC by September 1, 2017. Hospitals were notified of this deadline and of all other deadlines and requirements, including the requirement to review and verify their data as posted in the preliminary wage index data files on the Internet, through the letters sent to them by their MACs. November 15, 2017 was the deadline for MACs to complete all desk reviews for hospital wage and occupational mix data and transmit revised Worksheet S-3 wage data and occupational mix data to CMS.

November 4, 2017 was the date by when MACs notified State hospital associations regarding hospitals that failed to respond to issues raised during the desk reviews. Additional revisions made by the MACs were transmitted to CMS throughout January 2018. CMS published the wage index PUFs that included hospitals' revised wage index data on February 2, 2018. Hospitals had until February 16, 2018, to submit requests to the MACs to correct errors in the February 2, 2018 PUF due to CMS or MAC mishandling of the wage index data, or to revise desk review adjustments to their wage

index data as included in the February 2, 2018 PUF. Hospitals also were required to submit sufficient documentation to support their requests.

After reviewing requested changes submitted by hospitals, MACs were required to transmit to CMS any additional revisions resulting from the hospitals' reconsideration requests by March 23, 2018. Under our current policy as adopted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38153), the deadline for a hospital to request CMS intervention in cases where a hospital disagreed with a MAC's handling of wage data on any basis (including a policy, factual, or other dispute) was April 5, 2018. Data that were incorrect in the preliminary or February 2, 2018 wage index data PUFs, but for which no correction request was received by the February 16, 2018 deadline, were not considered for correction at this stage. In addition, April 5, 2018 was the deadline for hospitals to dispute data corrections made by CMS of which the hospital was notified after the February 2, 2018 PUF and at least 14 calendar days prior to April 5, 2018 (that is, March 22, 2018), that did not arise from a hospital's request for revisions. We note that, as we did for the FY 2018 wage index, for the FY 2019 wage index, in accordance with the FY 2019 wage index timeline posted on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Files-Items/FY-2019-Wage-Index-Home-Page.html>

, the April appeals had to be sent via mail and email. We refer readers to the wage index timeline for complete details.

Hospitals were given the opportunity to examine Table 2 associated with the proposed rule, which was listed in section VI. of the Addendum to the proposed rule and

available via the Internet on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Home-Page.html>. Table 2 associated with the proposed rule contained each hospital's proposed adjusted average hourly wage used to construct the wage index values for the past 3 years, including the FY 2015 data used to construct the proposed FY 2019 wage index. We noted in the proposed rule (83 FR 20369) that the proposed hospital average hourly wages shown in Table 2 only reflected changes made to a hospital's data that were transmitted to CMS by early February 2018.

We posted the final wage index data PUFs on April 27, 2018 via the Internet on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Files-Items/FY-2019-Wage-Index-Home-Page.html>. The April 2018 PUFs were made available solely for the limited purpose of identifying any potential errors made by CMS or the MAC in the entry of the final wage index data that resulted from the correction process previously described (the process for disputing revisions submitted to CMS by the MACs by March 23, 2018, and the process for disputing data corrections made by CMS that did not arise from a hospital's request for wage data revisions as discussed earlier).

After the release of the April 2018 wage index data PUFs, changes to the wage and occupational mix data could only be made in those very limited situations involving an error by the MAC or CMS that the hospital could not have known about before its

review of the final wage index data files. Specifically, neither the MAC nor CMS will approve the following types of requests:

- Requests for wage index data corrections that were submitted too late to be included in the data transmitted to CMS by the MACs on or before March 23, 2017.
- Requests for correction of errors that were not, but could have been, identified during the hospital's review of the February 2, 2018 wage index PUFs.
- Requests to revisit factual determinations or policy interpretations made by the MAC or CMS during the wage index data correction process.

If, after reviewing the April 2018 final wage index data PUFs, a hospital believed that its wage or occupational mix data were incorrect due to a MAC or CMS error in the entry or tabulation of the final data, the hospital was given the opportunity to notify both its MAC and CMS regarding why the hospital believed an error exists and provide all supporting information, including relevant dates (for example, when it first became aware of the error). The hospital was required to send its request to CMS and to the MAC no later than May 30, 2018. May 30, 2018 was also the deadline for hospitals to dispute data corrections made by CMS of which the hospital was notified on or after 13 calendar days prior to April 5, 2018 (that is, March 23, 2018), and at least 14 calendar days prior to May 30, 2018 (that is, May 16, 2018), that did not arise from a hospital's request for revisions. (Data corrections made by CMS of which a hospital was notified on or after 13 calendar days prior to May 30, 2018 (that is, May 17, 2018) may be appealed to the Provider Reimbursement Review Board (PRRB).) Similar to the April appeals, beginning with the FY 2015 wage index, in accordance with the FY 2019 wage index

timeline posted on the CMS website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Wage-Index-Files-Items/FY-2019-Wage-Index-Home-Page.html>, the May appeals were required to be sent via mail and email to CMS and the MACs. We refer readers to the wage index timeline for complete details.

Verified corrections to the wage index data received timely (that is, by May 30, 2018) by CMS and the MACs were incorporated into the final FY 2019 wage index, which is effective October 1, 2018.

We created the processes previously described to resolve all substantive wage index data correction disputes before we finalize the wage and occupational mix data for the FY 2019 payment rates. Accordingly, hospitals that did not meet the procedural deadlines set forth earlier will not be afforded a later opportunity to submit wage index data corrections or to dispute the MAC's decision with respect to requested changes. Specifically, our policy is that hospitals that do not meet the procedural deadlines set forth above (requiring requests to MACs by the specified date in February and, where such requests are unsuccessful, requests for intervention by CMS by the specified date in April) will not be permitted to challenge later, before the PRRB, the failure of CMS to make a requested data revision. We refer readers also to the FY 2000 IPPS final rule (64 FR 41513) for a discussion of the parameters for appeals to the PRRB for wage index data corrections. As finalized in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38154 through 38156), this policy also applies to a hospital disputing corrections made by CMS that do not arise from a hospital's request for a wage index data revision. That is, a hospital disputing an adjustment made by CMS that did not arise from a hospital's

request for a wage index data revision would be required to request a correction by the first applicable deadline. Hospitals that do not meet the procedural deadlines set forth earlier will not be afforded a later opportunity to submit wage index data corrections or to dispute CMS' decision with respect to requested changes.

Again, we believe the wage index data correction process described earlier provides hospitals with sufficient opportunity to bring errors in their wage and occupational mix data to the MAC's attention. Moreover, because hospitals had access to the final wage index data PUFs by late April 2018, they had the opportunity to detect any data entry or tabulation errors made by the MAC or CMS before the development and publication of the final FY 2019 wage index by August 2018, and the implementation of the FY 2019 wage index on October 1, 2018. Given these processes, the wage index implemented on October 1 should be accurate. Nevertheless, in the event that errors are identified by hospitals and brought to our attention after May 30, 2018, we retain the right to make midyear changes to the wage index under very limited circumstances.

Specifically, in accordance with 42 CFR 412.64(k)(1) of our regulations, we make midyear corrections to the wage index for an area only if a hospital can show that: (1) the MAC or CMS made an error in tabulating its data; and (2) the requesting hospital could not have known about the error or did not have an opportunity to correct the error, before the beginning of the fiscal year. For purposes of this provision, "before the beginning of the fiscal year" means by the May deadline for making corrections to the wage data for the following fiscal year's wage index (for example, May 30, 2018 for the FY 2019 wage

index). This provision is not available to a hospital seeking to revise another hospital's data that may be affecting the requesting hospital's wage index for the labor market area. As indicated earlier, because CMS makes the wage index data available to hospitals on the CMS website prior to publishing both the proposed and final IPPS rules, and the MACs notify hospitals directly of any wage index data changes after completing their desk reviews, we do not expect that midyear corrections will be necessary. However, under our current policy, if the correction of a data error changes the wage index value for an area, the revised wage index value will be effective prospectively from the date the correction is made.

In the FY 2006 IPPS final rule (70 FR 47385 through 47387 and 47485), we revised 42 CFR 412.64(k)(2) to specify that, effective on October 1, 2005, that is, beginning with the FY 2006 wage index, a change to the wage index can be made retroactive to the beginning of the Federal fiscal year only when CMS determines all of the following: (1) the MAC or CMS made an error in tabulating data used for the wage index calculation; (2) the hospital knew about the error and requested that the MAC and CMS correct the error using the established process and within the established schedule for requesting corrections to the wage index data, before the beginning of the fiscal year for the applicable IPPS update (that is, by the May 30, 2018 deadline for the FY 2019 wage index); and (3) CMS agreed before October 1 that the MAC or CMS made an error in tabulating the hospital's wage index data and the wage index should be corrected.

In those circumstances where a hospital requested a correction to its wage index data before CMS calculated the final wage index (that is, by the May 30, 2018 deadline

for the FY 2019 wage index), and CMS acknowledges that the error in the hospital's wage index data was caused by CMS' or the MAC's mishandling of the data, we believe that the hospital should not be penalized by our delay in publishing or implementing the correction. As with our current policy, we indicated that the provision is not available to a hospital seeking to revise another hospital's data. In addition, the provision cannot be used to correct prior years' wage index data; and it can only be used for the current Federal fiscal year. In situations where our policies would allow midyear corrections other than those specified in 42 CFR 412.64(k)(2)(ii), we continue to believe that it is appropriate to make prospective-only corrections to the wage index.

We note that, as with prospective changes to the wage index, the final retroactive correction will be made irrespective of whether the change increases or decreases a hospital's payment rate. In addition, we note that the policy of retroactive adjustment will still apply in those instances where a final judicial decision reverses a CMS denial of a hospital's wage index data revision request.

## 2. Process for Data Corrections by CMS After the February 2 Public Use File (PUF)

The process set forth with the wage index timeline discussed in section III.L.1. of the preamble of this final rule allows hospitals to request corrections to their wage index data within prescribed timeframes. In addition to hospitals' opportunity to request corrections of wage index data errors or MACs' mishandling of data, CMS has the authority under section 1886(d)(3)(E) of the Act to make corrections to hospital wage index and occupational mix data in order to ensure the accuracy of the wage index. As we explained in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49490 through 49491)

and the FY 2017 IPPS/LTCH PPS final rule (81 FR 56914), section 1886(d)(3)(E) of the Act requires the Secretary to adjust the proportion of hospitals' costs attributable to wages and wage-related costs for area differences reflecting the relative hospital wage level in the geographic areas of the hospital compared to the national average hospital wage level. We believe that, under section 1886(d)(3)(E) of the Act, we have discretion to make corrections to hospitals' data to help ensure that the costs attributable to wages and wage-related costs in fact accurately reflect the relative hospital wage level in the hospitals' geographic areas.

We have an established multistep, 15-month process for the review and correction of the hospital wage data that is used to create the IPPS wage index for the upcoming fiscal year. Since the origin of the IPPS, the wage index has been subject to its own annual review process, first by the MACs, and then by CMS. As a standard practice, after each annual desk review, CMS reviews the results of the MACs' desk reviews and focuses on items flagged during the desk review, requiring that, if necessary, hospitals provide additional documentation, adjustments, or corrections to the data. This ongoing communication with hospitals about their wage data may result in the discovery by CMS of additional items that were reported incorrectly or other data errors, even after the posting of the February 2 PUF, and throughout the remainder of the wage index development process. In addition, the fact that CMS analyzes the data from a regional and even national level, unlike the review performed by the MACs that review a limited subset of hospitals, can facilitate additional editing of the data that may not be readily apparent to the MACs. In these occasional instances, an error may be of sufficient

magnitude that the wage index of an entire CBSA is affected. Accordingly, CMS uses its authority to ensure that the wage index accurately reflects the relative hospital wage level in the geographic area of the hospital compared to the national average hospital wage level, by continuing to make corrections to hospital wage data upon discovering incorrect wage data, distinct from instances in which hospitals request data revisions.

We note that CMS corrects errors to hospital wage data as appropriate, regardless of whether that correction will raise or lower a hospital's average hourly wage. For example, as discussed in section III.D.2. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, in the calculation of the proposed FY 2019 wage index, upon discovering that hospitals reported other wage-related costs on Line 18 of Worksheet S-3, despite those other wage-related costs failing to meet the requirement that other wage-related costs must exceed 1 percent of total adjusted salaries net of excluded area salaries, CMS made internal edits to remove those other wage-related costs from Line 18. Conversely, if CMS discovers after conclusion of the desk review, for example, that a MAC inadvertently failed to incorporate positive adjustments resulting from a prior year's wage index appeal of a hospital's wage-related costs such as pension, CMS would correct that data error and the hospital's average hourly wage would likely increase as a result.

While we maintain CMS' authority to conduct additional review and make resulting corrections at any time during the wage index development process, in accordance with the policy finalized in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38154 through 38156), starting with the FY 2019 wage index, we implemented a

process for hospitals to request further review of a correction made by CMS that did not arise from a hospital's request for a wage index data correction. Instances where CMS makes a correction to a hospital's data after the February 2 PUF based on a different understanding than the hospital about certain reported costs, for example, could potentially be resolved using this process before the final wage index is calculated. We believe this process and the timeline for requesting such corrections (as described earlier and in the FY 2018 IPPS/LTCH PPS final rule) bring additional transparency to instances where CMS makes data corrections after the February 2 PUF, and provide opportunities for hospitals to request further review of CMS changes in time for the most accurate data to be reflected in the final wage index calculations. These additional appeals opportunities are described earlier and in the FY 2019 Wage Index Development Time Table, as well as in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38154 through 38156).

#### M. Labor-Related Share for the FY 2019 Wage Index

Section 1886(d)(3)(E) of the Act directs the Secretary to adjust the proportion of the national prospective payment system base payment rates that are attributable to wages and wage-related costs by a factor that reflects the relative differences in labor costs among geographic areas. It also directs the Secretary to estimate from time to time the proportion of hospital costs that are labor-related and to adjust the proportion (as estimated by the Secretary from time to time) of hospitals' costs which are attributable to wages and wage-related costs of the DRG prospective payment rates. We refer to the portion of hospital costs attributable to wages and wage-related costs as the labor-related

share. The labor-related share of the prospective payment rate is adjusted by an index of relative labor costs, which is referred to as the wage index.

Section 403 of Pub. L. 108-173 amended section 1886(d)(3)(E) of the Act to provide that the Secretary must employ 62 percent as the labor-related share unless this would result in lower payments to a hospital than would otherwise be made. However, this provision of Pub. L. 108-173 did not change the legal requirement that the Secretary estimate from time to time the proportion of hospitals' costs that are attributable to wages and wage-related costs. Thus, hospitals receive payment based on either a 62-percent labor-related share, or the labor-related share estimated from time to time by the Secretary, depending on which labor-related share resulted in a higher payment.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38158 through 38175), we rebased and revised the hospital market basket. We established a 2014-based IPPS hospital market basket to replace the FY 2010-based IPPS hospital market basket, effective October 1, 2017. Using the 2014-based IPPS market basket, we finalized a labor-related share of 68.3 percent for discharges occurring on or after October 1, 2017. In addition, in FY 2018, we implemented this revised and rebased labor-related share in a budget neutral manner (82 FR 38522). However, consistent with section 1886(d)(3)(E) of the Act, we did not take into account the additional payments that would be made as a result of hospitals with a wage index less than or equal to 1.0000 being paid using a labor-related share lower than the labor-related share of hospitals with a wage index greater than 1.0000.

The labor-related share is used to determine the proportion of the national IPPS base payment rate to which the area wage index is applied. We include a cost category in the labor-related share if the costs are labor intensive and vary with the local labor market. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20371), for FY 2019, we did not propose to make any further changes to the national average proportion of operating costs that are attributable to wages and salaries, employee benefits, professional fees: labor-related, administrative and facilities support services, installation, maintenance, and repair services, and all other labor-related services. Therefore, for FY 2019, we proposed to continue to use a labor-related share of 68.3 percent for discharges occurring on or after October 1, 2018.

As discussed in section IV.B. of the preamble of this final rule, prior to January 1, 2016, Puerto Rico hospitals were paid based on 75 percent of the national standardized amount and 25 percent of the Puerto Rico-specific standardized amount. As a result, we applied the Puerto Rico-specific labor-related share percentage and nonlabor-related share percentage to the Puerto Rico-specific standardized amount. Section 601 of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113) amended section 1886(d)(9)(E) of the Act to specify that the payment calculation with respect to operating costs of inpatient hospital services of a subsection (d) Puerto Rico hospital for inpatient hospital discharges on or after January 1, 2016, shall use 100 percent of the national standardized amount. Because Puerto Rico hospitals are no longer paid with a Puerto Rico-specific standardized amount as of January 1, 2016, under section 1886(d)(9)(E) of the Act as amended by section 601 of the Consolidated Appropriations

Act, 2016, there is no longer a need for us to calculate a Puerto Rico-specific labor-related share percentage and nonlabor-related share percentage for application to the Puerto Rico-specific standardized amount. Hospitals in Puerto Rico are now paid 100 percent of the national standardized amount and, therefore, are subject to the national labor-related share and nonlabor-related share percentages that are applied to the national standardized amount. Accordingly, for FY 2019, we did not propose a Puerto Rico-specific labor-related share percentage or a nonlabor-related share percentage.

We did not receive any public comments on our proposals related to the labor-related share percentage. Therefore, we are finalizing our proposals, without modification, to continue to use a labor-related share of 68.3 percent for discharges occurring on or after October 1, 2018 for all hospitals (including Puerto Rico hospitals) whose wage indexes are greater than 1.0000.

Tables 1A and 1B, which are published in section VI. of the Addendum to this FY 2019 IPPS/LTCH PPS final rule and available via the Internet on the CMS website, reflect the national labor-related share, which is also applicable to Puerto Rico hospitals. For FY 2019, for all IPPS hospitals (including Puerto Rico hospitals) whose wage indexes are less than or equal to 1.0000, we are applying the wage index to a labor-related share of 62 percent of the national standardized amount. For all IPPS hospitals (including Puerto Rico hospitals) whose wage indexes are greater than 1.000, for FY 2019, we are applying the wage index to a labor-related share of 68.3 percent of the national standardized amount.

#### **IV. Other Decisions and Changes to the IPPS for Operating System**

##### A. Changes to MS-DRGs Subject to Postacute Care Transfer Policy and MS-DRG Special Payments Policies (§ 412.4)

###### 1. Background

Existing regulations at 42 CFR 412.4(a) define discharges under the IPPS as situations in which a patient is formally released from an acute care hospital or dies in the hospital. Section 412.4(b) defines acute care transfers, and § 412.4(c) defines postacute care transfers. Our policy set forth in § 412.4(f) provides that when a patient is transferred and his or her length of stay is less than the geometric mean length of stay for the MS-DRG to which the case is assigned, the transferring hospital is generally paid based on a graduated per diem rate for each day of stay, not to exceed the full MS-DRG payment that would have been made if the patient had been discharged without being transferred.

The per diem rate paid to a transferring hospital is calculated by dividing the full MS-DRG payment by the geometric mean length of stay for the MS-DRG. Based on an analysis that showed that the first day of hospitalization is the most expensive (60 FR 45804), our policy generally provides for payment that is twice the per diem amount for the first day, with each subsequent day paid at the per diem amount up to the full MS-DRG payment (§ 412.4(f)(1)). Transfer cases also are eligible for outlier payments. In general, the outlier threshold for transfer cases, as described in § 412.80(b), is equal to the fixed-loss outlier threshold for nontransfer cases (adjusted for geographic

variations in costs), divided by the geometric mean length of stay for the MS-DRG, and multiplied by the length of stay for the case, plus 1 day.

We established the criteria set forth in § 412.4(d) for determining which DRGs qualify for postacute care transfer payments in the FY 2006 IPPS final rule (70 FR 47419 through 47420). The determination of whether a DRG is subject to the postacute care transfer policy was initially based on the Medicare Version 23.0 GROUPER (FY 2006) and data from the FY 2004 MedPAR file. However, if a DRG did not exist in Version 23.0 or a DRG included in Version 23.0 is revised, we use the current version of the Medicare GROUPER and the most recent complete year of MedPAR data to determine if the DRG is subject to the postacute care transfer policy. Specifically, if the MS-DRG's total number of discharges to postacute care equals or exceeds the 55<sup>th</sup> percentile for all MS-DRGs and the proportion of short-stay discharges to postacute care to total discharges in the MS-DRG exceeds the 55<sup>th</sup> percentile for all MS-DRGs, CMS will apply the postacute care transfer policy to that MS-DRG and to any other MS-DRG that shares the same base MS-DRG. The statute directs us to identify MS-DRGs based on a high volume of discharges to postacute care facilities and a disproportionate use of postacute care services. As discussed in the FY 2006 IPPS final rule (70 FR 47416), we determined that the 55th percentile is an appropriate level at which to establish these thresholds. In that same final rule (70 FR 47419), we stated that we will not revise the list of DRGs subject to the postacute care transfer policy annually unless we are making a change to a specific MS-DRG.

To account for MS-DRGs subject to the postacute care policy that exhibit exceptionally higher shares of costs very early in the hospital stay, § 412.4(f) also includes a special payment methodology. For these MS-DRGs, hospitals receive 50 percent of the full MS-DRG payment, plus the single per diem payment, for the first day of the stay, as well as a per diem payment for subsequent days (up to the full MS-DRG payment (§ 412.4(f)(6))). For an MS-DRG to qualify for the special payment methodology, the geometric mean length of stay must be greater than 4 days, and the average charges of 1-day discharge cases in the MS-DRG must be at least 50 percent of the average charges for all cases within the MS-DRG. MS-DRGs that are part of an MS-DRG severity level group will qualify under the MS-DRG special payment methodology policy if any one of the MS-DRGs that share that same base MS-DRG qualifies (§ 412.4(f)(6)).

## 2. Changes for FY 2019

As discussed in section II.F. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule, based on our analysis of FY 2017 MedPAR claims data, we proposed to make changes to a number of MS-DRGs, effective for FY 2019. Specifically, we proposed to:

- Assign CAR-T therapy procedure codes to MS-DRG 016 (proposed revised title: Autologous Bone Marrow Transplant with CC/MCC or T-Cell Immunotherapy);
- Delete MS-DRG 685 (Admit for Renal Dialysis) and reassign diagnosis codes from MS-DRG 685 to MS-DRGs 698, 699, and 700 (Other Kidney and Urinary Tract Diagnoses with MCC, with CC, and without CC/MCC, respectively);

- Delete 10 MS-DRGs (MS-DRGs 765, 766, 767, 774, 775, 777, 778, 780, 781, and 782) and create 18 new MS-DRGs relating to Pregnancy, Childbirth and the Puerperium (MS-DRGs 783 through 788, 794, 796, 798, 805, 806, 807, 817, 818, 819, and 831 through 833);

- Assign two additional diagnosis codes to MS-DRG 023 (Craniotomy with Major Device Implant or Acute Complex Central Nervous System (CNS) Principal Diagnosis (PDX) with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator);

- Reassign 12 ICD-10-PCS procedure codes from MS-DRGs 329, 330 and 331 (Major Small and Large Bowel Procedures with MCC, with CC, and without CC/MCC, respectively) to MS-DRGs 344, 345, and 346 (Minor Small and Large Bowel Procedures with MCC, with CC, and without CC/MCC, respectively); and

- Reassign ICD-10-CM diagnosis codes R65.10 and R65.11 from MS-DRGs 870, 871, and 872 (Septicemia or Severe Sepsis with and without Mechanical Ventilation >96 Hours with and without MCC, respectively) to MS-DRG 864 (proposed revised title: Fever and Inflammatory Conditions).

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule, in light of the proposed changes to these MS-DRGs for FY 2019, according to the regulations under § 412.4(d), we evaluated these MS-DRGs using the general postacute care transfer policy criteria and data from the FY 2017 MedPAR file. If an MS-DRG qualified for the postacute care transfer policy, we also evaluated that MS-DRG under the special payment methodology criteria according to regulations at § 412.4(f)(6). We stated in the proposed

rule that we continue to believe it is appropriate to reassess MS-DRGs when proposing reassignment of procedure codes or diagnosis codes that would result in material changes to an MS-DRG. We noted that MS-DRGs 023, 329, 330, 331, 698, 699, 700, 870, 871, and 872 are currently subject to the postacute care transfer policy. We stated that as a result of our review, these MS-DRGs, as proposed to be revised, would continue to qualify to be included on the list of MS-DRGs that are subject to the postacute care transfer policy. We note that, as discussed in section II.F.5.b. of the preamble of this final rule, we are finalizing these proposed changes to the MS-DRGs with the exception of our proposed revisions to MS-DRGs 329, 330, 331, 344, 345, and 336, which we are not finalizing. Therefore, MS DRGs 329, 330, 331, 344, 345, and 336 are not included in the updated analysis of the postacute care transfer policy and special payment policy criteria discussed below. We note that MS-DRGs that are subject to the postacute transfer policy for FY 2018 and are not revised will continue to be subject to the policy in FY 2019.

Using the December 2017 update of the FY 2017 MedPAR file, we developed a chart for the proposed rule (83 FR 20378 through 20380) which set forth the analysis of the postacute care transfer policy criteria completed for the proposed rule with respect to each of these proposed new or revised MS-DRGs. We note that, in the proposed rule, we incorrectly stated that we used the March 2018 update for purposes of this analysis rather than the December 2017 update. We indicated that, for the FY 2019 final rule, we would update this analysis using the most recent available data at that time. The following chart reflects our updated analysis for the finalized new and revised MS-DRGs using the

postacute care transfer policy criteria and the March 2018 update of the FY 2017 MedPAR file. We note that, with the additional time since the proposed rule, this analysis does take into account the change relating to discharges to hospice care, effective October 1, 2018, discussed in section IV.A.3. of the preamble of this final rule. We also note that the postacute care transfer policy status for all finalized new and revised MS-DRGs remains unchanged from the proposed rule.

<b>LIST OF NEW OR REVISED MS-DRGs SUBJECT TO REVIEW OF POSTACUTE CARE TRANSFER POLICY STATUS FOR FY 2019</b>						
<b>New or Revised MS-DRG</b>	<b>MS-DRG Title</b>	<b>Total Cases</b>	<b>Postacute Care Transfers (55<sup>th</sup> percentile: 1,432)</b>	<b>Short-Stay Postacute Care Transfers</b>	<b>Percent of Short-Stay Postacute Care Transfers to all Cases (55<sup>th</sup> percentile: 8.955224%)</b>	<b>Postacute Care Transfer Policy Status</b>
016	Autologous Bone Marrow Transplant with CC/MCC or T-Cell Immunotherapy (Revised)	2,095	422*	127	6.06%*	No
023	Craniotomy with Major Device Implant or Acute CNS Principal Diagnosis with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator (Revised)	9,270	5,859	1,681	18.13%	Yes
698	Other Kidney and Urinary Tract Diagnoses with MCC (Revised)	55,393	36,062	8,386	15.14%	Yes
699	Other Kidney and Urinary Tract Diagnoses with CC (Revised)	35,860	17,233	3,435	9.58%	Yes
700	Other Kidney and Urinary Tract Diagnoses without CC/MCC (Revised)	4,466	1,642	187	4.19%*	Yes**
783	Cesarean Section with Sterilization with MCC (New)	193	6*	0	0.00%*	No
784	Cesarean Section with Sterilization with CC ( New)	549	19*	0	0.00%*	No
785	Cesarean Section with Sterilization without CC/MCC (New)	507	6*	0	0.00%*	No

<b>LIST OF NEW OR REVISED MS-DRGs SUBJECT TO REVIEW OF POSTACUTE CARE TRANSFER POLICY STATUS FOR FY 2019</b>						
<b>New or Revised MS-DRG</b>	<b>MS-DRG Title</b>	<b>Total Cases</b>	<b>Postacute Care Transfers (55<sup>th</sup> percentile: 1,432)</b>	<b>Short-Stay Postacute Care Transfers</b>	<b>Percent of Short-Stay Postacute Care Transfers to all Cases (55<sup>th</sup> percentile: 8.955224%)</b>	<b>Postacute Care Transfer Policy Status</b>
786	Cesarean Section without Sterilization with MCC (New)	755	35*	6	0.79%*	No
787	Cesarean Section without Sterilization with CC (New)	2,050	95*	3	0.15%*	No
788	Cesarean Section without Sterilization without CC/MCC (New)	1,868	41*	0	0.00%*	No
794	Vaginal Delivery with Sterilization/D&C with MCC (New)	1	1*	0	0.00%*	No
796	Vaginal Delivery with Sterilization/D&C with CC (New)	49	2*	0	0.00%*	No
798	Vaginal Delivery with Sterilization/D&C without CC/MCC (New)	160	1*	0	0.00%*	No
805	Vaginal Delivery without Sterilization/D&C with MCC (New)	506	20*	0	0.00%*	No
806	Vaginal Delivery without Sterilization/D&C with CC (New)	2,143	71*	2	0.09%*	No
807	Vaginal Delivery without Sterilization/D&C without CC/MCC (New)	3,833	71*	7	0.18%*	No
817	Other Antepartum Diagnoses with O.R. Procedure with MCC (New)	75	12*	0	0.00%*	No
818	Other Antepartum Diagnoses with O.R. Procedure with CC (New)	88	5*	1	1.14%*	No
819	Other Antepartum Diagnoses with O.R. Procedure without CC/MCC (New)	53	1*	0	0.00%*	No
831	Other Antepartum Diagnoses without O.R. Procedure with MCC (New)	859	31*	1	0.12%*	No

<b>LIST OF NEW OR REVISED MS-DRGs SUBJECT TO REVIEW OF POSTACUTE CARE TRANSFER POLICY STATUS FOR FY 2019</b>						
<b>New or Revised MS-DRG</b>	<b>MS-DRG Title</b>	<b>Total Cases</b>	<b>Postacute Care Transfers (55<sup>th</sup> percentile: 1,432)</b>	<b>Short-Stay Postacute Care Transfers</b>	<b>Percent of Short-Stay Postacute Care Transfers to all Cases (55<sup>th</sup> percentile: 8.955224%)</b>	<b>Postacute Care Transfer Policy Status</b>
832	Other Antepartum Diagnoses without O.R. Procedure with CC (New)	1,257	53*	13	1.03%*	No
833	Other Antepartum Diagnoses without O.R. Procedure without CC/MCC (New)	663	11*	0	0.00%*	No
864	Fever and Inflammatory Conditions (Revised)	12,206	4,064	313	2.56%*	No
870	Septicemia or Severe Sepsis with Mechanical Ventilation >96 Hours (Revised)	34,468	18,534	6,550	19.00%	Yes
871	Septicemia or Severe Sepsis without Mechanical Ventilation >96 Hours with MCC (Revised)	583,535	323,308	56,341	9.66%	Yes
872	Septicemia or Severe Sepsis without Mechanical Ventilation >96 Hours without MCC (Revised)	165,853	75,185	8,323	5.02%*	Yes**

\* Indicates a current postacute care transfer policy criterion that the MS-DRG did not meet.

\*\* As described in the policy at 42 CFR 412.4(d)(3)(ii)(D), MS-DRGs that share the same base MS-DRG will all qualify under the postacute care transfer policy if any one of the MS-DRGs that share that same base MS-DRG qualifies.

Based on our annual review of proposed new or revised MS-DRGs and analysis of the December 2017 update of the FY 2017 MedPAR file, we identified MS-DRGs that we proposed to include on the list of MS-DRGs subject to the special payment methodology policy. We note that, in the proposed rule, we incorrectly stated that we used the March 2018 update for purposes of this analysis rather than the December 2017 update. We noted in the proposed rule that none of the proposed revised MS-DRGs that were listed in the table included in the proposed rule as continuing to meet the criteria for

postacute care transfer policy status (specifically, MS-DRGs 023, 330, 331, 698, 699, 700, 870, 871, and 872) are currently listed as being subject to the special payment methodology (as noted above, we are not finalizing the proposed changes to MS-DRGs 330 and 331 and therefore they are not included in the updated analysis below). Based on our analysis of proposed changes to MS-DRGs included in the proposed rule, we determined that proposed revised MS-DRG 023 (Craniotomy with Major Device Implant or Acute Complex CNS Principal Diagnosis with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator) would meet the criteria for the MS-DRG special payment methodology. Therefore, we proposed that proposed revised MS-DRG 023 would be subject to the MS-DRG special payment methodology, effective FY 2019. As described in the regulations at § 412.4(f)(6)(iv), MS-DRGs that share the same base MS-DRG will all qualify under the MS-DRG special payment policy if any one of the MS-DRGs that share that same base MS-DRG qualifies. Therefore, we proposed that MS-DRG 024 (Craniotomy with Major Device Implant or Acute Complex CNS Principal Diagnosis without MCC or Chemotherapy Implant or Epilepsy with Neurostimulator) also would be subject to the MS-DRG special payment methodology, effective for FY 2019.

In the proposed rule, we indicated that, for the FY 2019 final rule, we would update this analysis using the most recent available data at that time. The following chart reflects our updated analysis for the finalized new and revised MS-DRGs using our criteria and the March 2018 update of the FY 2017 MedPAR file. We note that with the additional time since the proposed rule this analysis does take into account the change relating to discharges to hospice care, effective October 1, 2018, discussed in section

IV.A.3. of the preamble of this final rule. We also note that status for all finalized new and revised MS-DRGs remains unchanged from the proposed rule.

<b>LIST OF REVISED MS-DRGs SUBJECT TO REVIEW OF SPECIAL PAYMENT POLICY STATUS FOR FY 2019</b>					
<b>Revised MS-DRG</b>	<b>MS-DRG Title</b>	<b>Geometric Mean Length of Stay</b>	<b>Average Charges of 1-Day Discharges</b>	<b>50 Percent of Average Charges for all Cases within MS-DRG</b>	<b>Special Payment Policy Status</b>
023	Craniotomy with Major Device Implant or Acute CNS Principal Diagnosis with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator	7.3	\$97,557	\$96,623	Yes
698	Other Kidney and Urinary Tract Diagnoses with MCC	4.9	\$18,290	\$25,199	No
699	Other Kidney and Urinary Tract Diagnoses with CC	3.4	\$16,872	\$16,984	No
700	Other Kidney and Urinary Tract Diagnoses without CC/MCC	2.5	\$14,283	\$12,943	No
870	Septicemia or Severe Sepsis with Mechanical Ventilation >96 Hours	12.4	\$0	\$102,505	No
871	Septicemia or Severe Sepsis without Mechanical Ventilation >96 Hours with MCC	4.8	\$19,860	\$29,939	No
872	Septicemia or Severe Sepsis without Mechanical Ventilation >96 Hours without MCC	3.7	\$18,096	\$17,399	No

We did not receive any public comments specific to our proposal that MS-DRGs 23 and 24 would be subject to the special payment methodology effective FY 2019. Therefore, we are finalizing this proposal without modification.

The special payment policy status of these MS-DRGs is reflected in Table 5 associated with this final rule, which is listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website.

### 3. Implementation of Changes Required by Section 53109 of the Bipartisan Budget Act of 2018

Prior to the enactment of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), under section 1886(d)(5)(J) of the Act, a discharge was deemed a “qualified discharge” if the individual was discharged to one of the following postacute care settings:

- A hospital or hospital unit that is not a subsection (d) hospital.
- A skilled nursing facility.
- Related home health services provided by a home health agency provided

within a timeframe established by the Secretary (beginning within 3 days after the date of discharge).

Section 53109 of the Bipartisan Budget Act of 2018 amended section 1886(d)(5)(J)(ii) of the Act to also include discharges to hospice care by a hospice program as a qualified discharge, effective for discharges occurring on or after October 1, 2018. Accordingly, effective for discharges occurring on or after October 1, 2018, if a discharge is assigned to one of the MS-DRGs subject to the postacute care transfer policy and the individual is transferred to hospice care by a hospice program, the discharge would be subject to payment as a transfer case. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20381 and 20382), we proposed to make conforming amendments to § 412.4(c) of the regulation to include discharges to hospice

care occurring on or after October 1, 2018 as qualified discharges. We proposed that hospital bills with a Patient Discharge Status code of 50 (Discharged/Transferred to Hospice - Routine or Continuous Home Care) or 51 (Discharged/Transferred to Hospice, General Inpatient Care or Inpatient Respite) would be subject to the postacute care transfer policy in accordance with this statutory amendment. We stated in the proposed rule that, consistent with our policy for other qualified discharges, CMS claims processing software will be revised to identify cases in which hospice benefits were billed on the date of hospital discharge without the appropriate discharge status code. Such claims will be returned as unpayable to the hospital and may be rebilled with a corrected discharge code.

Comment: Several comments opposed the inclusion of discharges to hospice care as subject to the postacute care transfer policy. The commenters questioned the efficacy of including hospice care within the postacute care transfer policy in terms of patient choice and quality of life at end of life. The commenters believed that the proposed policy would inject payment concerns within medical decisions regarding appropriate placement and consideration of patient needs and preferences. They contended that such payment policies would dissuade transfers to hospice care and potentially result in a perverse incentive to delay hospice care election. The commenters further contended that the initial rationale for the postacute care transfer policy does not, and should not apply to discharges to hospice. They stated that the initial impetus for the postacute care transfer policy was to discourage hospitals from admitting and then quickly discharging patients to a postacute care setting for therapeutic care. Because hospice providers would not

provide curative care, the commenters believed there would be no duplicative services provided by the discharging hospital and the postacute care provider. The commenters provided academic research demonstrating the numerous patient care benefits related to fast-track discharges from hospitals to hospices. One commenter provided analysis to demonstrate that the proposed application of the postacute care transfer policy to hospice discharges could potentially negatively impact up to 25 percent of hospice admissions nationally, with some providers experiencing rates as high as 33 percent. The same commenter also suggested several ways CMS could evaluate the implementation of the postacute care transfer policy and its effects on hospice care. Several commenters requested that, at a minimum, CMS monitor and provide detailed provider-specific data on the rates of hospice transfers, including inpatient days prior to hospice election, and to track whether the policy has a material impact on timely hospice care election for patients in inpatient stays.

While several commenters recognized the statutory requirement for the proposed changes, they urged CMS to use its administrative discretion to mitigate or delay the potentially harmful effects that the policy could have on access to the hospice benefit by Medicare beneficiaries facing the end of life.

Response: We thank commenters for the analysis and feedback provided. As stated in the first year of the IPPS on the hospital-to-hospital transfer policy, we stated that “(t)he rationale for per diem payment as part of our transfer policy is that the transferring hospital generally provides only a limited amount of treatment. Therefore, payment of the full prospective payment rate would be unwarranted” (49 FR 244). We

disagree that the postacute care transfer policy creates a perverse incentive to keep patients in the hospital longer than necessary. Our longstanding view is the policy addresses the appropriate level of payment once clinical decisions about the most appropriate care in the most appropriate setting have been made. Therefore, we do not believe it would be appropriate to treat discharges to hospice care differently than any of the other qualified postacute care settings. We believe that statute is unambiguous as to the actions CMS is required to implement for FY 2019. In addition to expanding the postacute care policy to include discharges to hospice, section 53109 of the Bipartisan Budget Act of 2018 also requires MedPAC to conduct a detailed evaluation of the implementation and impacts of this provision. Specifically, such a report must address whether the timely access to hospice care has been affected through changes to hospital policies or behaviors. Preliminary results of this report are due to Congress by March 21, 2020.

Comment: One comment requested that CMS rephrase the proposed changes to the regulation text at § 412.4(c). The commenter believed that the proposed text of “For discharges occurring on or after October 1, 2018, to hospice care by a hospice program.” could be interpreted to require a “hospice program” to initiate a qualified discharge. The commenters suggested that CMS rephrase this language to clearly indicate that a qualified discharge originates from a hospital.

Response: The terminology of “hospice care by a hospice program” was taken directly from section 53109 of the Bipartisan Budget Act of 2018. The terminology is similar to the language implemented in section 1861(dd) of the Act (“The term ‘hospice

care' means the following items and services provided to a terminally ill individual by... a hospice program). However, for sake of clarity, we are rephrasing the language that was originally proposed to instead read "For discharges occurring on or after October 1, 2018, to hospice care *provided* by a hospice program."

After consideration of the public comments we received, we are finalizing the proposed revisions to § 412.4(c) to include discharges to hospice care occurring on or after October 1, 2018 as qualified discharges, with one minor grammatical modification discussed previously. Hospital bills with a Patient Discharge Status code of 50 (Discharged/Transferred to Hospice - Routine or Continuous Home Care) or 51 (Discharged/Transferred to Hospice, General Inpatient Care or Inpatient Respite) will be subject to the postacute care transfer policy in accordance with this statutory amendment, effective for discharges occurring on or after October 1, 2018.

#### B. Changes in the Inpatient Hospital Update for FY 2019 (§ 412.64(d))

##### 1. FY 2019 Inpatient Hospital Update

In accordance with section 1886(b)(3)(B)(i) of the Act, each year we update the national standardized amount for inpatient hospital operating costs by a factor called the "applicable percentage increase." For FY 2019, we are setting the applicable percentage increase by applying the adjustments listed in this section in the same sequence as we did for FY 2018. Specifically, consistent with section 1886(b)(3)(B) of the Act, as amended by sections 3401(a) and 10319(a) of the Affordable Care Act, we are setting the applicable percentage increase by applying the following adjustments in the following

sequence. The applicable percentage increase under the IPPS is equal to the rate-of-increase in the hospital market basket for IPPS hospitals in all areas, subject to—

(a) A reduction of one-quarter of the applicable percentage increase (prior to the application of other statutory adjustments; also referred to as the market basket update or rate-of-increase (with no adjustments)) for hospitals that fail to submit quality information under rules established by the Secretary in accordance with section 1886(b)(3)(B)(viii) of the Act;

(b) A reduction of three-quarters of the applicable percentage increase (prior to the application of other statutory adjustments; also referred to as the market basket update or rate-of-increase (with no adjustments)) for hospitals not considered to be meaningful EHR users in accordance with section 1886(b)(3)(B)(ix) of the Act;

(c) An adjustment based on changes in economy-wide productivity (the multifactor productivity (MFP) adjustment); and

(d) An additional reduction of 0.75 percentage point as required by section 1886(b)(3)(B)(xii) of the Act.

Sections 1886(b)(3)(B)(xi) and (b)(3)(B)(xii) of the Act, as added by section 3401(a) of the Affordable Care Act, state that application of the MFP adjustment and the additional FY 2019 adjustment of 0.75 percentage point may result in the applicable percentage increase being less than zero.

We note that, in compliance with section 404 of the MMA, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38158 through 38175), we replaced the

FY 2010-based IPPS operating market basket with the rebased and revised 2014-based IPPS operating market basket, effective with FY 2018.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20381), we proposed to base the proposed FY 2019 market basket update used to determine the applicable percentage increase for the IPPS on IHS Global Inc.'s (IGI's) fourth quarter 2017 forecast of the 2014-based IPPS market basket rate-of-increase with historical data through third quarter 2017, which was estimated to be 2.8 percent. We proposed that if more recent data subsequently became available (for example, a more recent estimate of the market basket and the MFP adjustment), we would use such data, if appropriate, to determine the FY 2019 market basket update and the MFP adjustment in the final rule.

Based on the most recent data available for this FY 2019 IPPS/LTCH PPS final rule (that is, IGI's second quarter 2018 forecast of the 2014-based IPPS market basket rate-of-increase with historical data through the first quarter of 2018), we estimate that the FY 2019 market basket update used to determine the applicable percentage increase for the IPPS is 2.9 percent.

For FY 2019, depending on whether a hospital submits quality data under the rules established in accordance with section 1886(b)(3)(B)(viii) of the Act (hereafter referred to as a hospital that submits quality data) and is a meaningful EHR user under section 1886(b)(3)(B)(ix) of the Act (hereafter referred to as a hospital that is a meaningful EHR user), there are four possible applicable percentage increases that can be applied to the standardized amount. Based on the most recent data described above, we

determined final applicable percentage increases to the standardized amount for FY 2019, as specified in the table that appears later in this section.

In the FY 2012 IPPS/LTCH PPS final rule (76 FR 51689 through 51692), we finalized our methodology for calculating and applying the MFP adjustment. As we explained in that rule, section 1886(b)(3)(B)(xi)(II) of the Act, as added by section 3401(a) of the Affordable Care Act, defines this productivity adjustment as equal to the 10-year moving average of changes in annual economy-wide, private nonfarm business MFP (as projected by the Secretary for the 10-year period ending with the applicable fiscal year, calendar year, cost reporting period, or other annual period). The Bureau of Labor Statistics (BLS) publishes the official measure of private nonfarm business MFP. We refer readers to the BLS website at <http://www.bls.gov/mfp> for the BLS historical published MFP data.

MFP is derived by subtracting the contribution of labor and capital input growth from output growth. The projections of the components of MFP are currently produced by IGI, a nationally recognized economic forecasting firm with which CMS contracts to forecast the components of the market baskets and MFP. As we discussed in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49509), beginning with the FY 2016 rulemaking cycle, the MFP adjustment is calculated using the revised series developed by IGI to proxy the aggregate capital inputs. Specifically, in order to generate a forecast of MFP, IGI forecasts BLS aggregate capital inputs using a regression model. A complete description of the MFP projection methodology is available on the CMS website at: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and->

[Reports/MedicareProgramRatesStats/MarketBasketResearch.html](#). As discussed in the FY 2016 IPPS/LTCH PPS final rule, if IGI makes changes to the MFP methodology, we will announce them on our website rather than in the annual rulemaking.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20382), for FY 2019, we proposed an MFP adjustment of 0.8 percentage point. Similar to the market basket update, for the proposed rule, we used IGI's fourth quarter 2017 forecast of the MFP adjustment to compute the proposed MFP adjustment. As noted previously, we proposed that if more recent data subsequently became available, we would use such data, if appropriate, to determine the FY 2019 market basket update and the MFP adjustment for the final rule.

Based on the most recent data available for this FY 2019 IPPS/LTCH PPS final rule (that is, IGI's second quarter 2018 forecast of the MFP adjustment with historical data through the first quarter of 2018), for FY 2019, we have determined an MFP adjustment of 0.8 percentage point.

We did not receive any public comments on our proposals to use the most recent available data to determine the final market basket update and the MFP adjustment. Therefore, for this final rule, we are finalizing a market basket update of 2.9 percent and an MFP adjustment of 0.8 percentage point for FY 2019 based on the most recent available data.

Based on the most recent available data for this final rule, as described previously, we have determined four applicable percentage increases to the standardized amount for FY 2019, as specified in the following table:

<b>FY 2019 APPLICABLE PERCENTAGE INCREASES FOR THE IPPS</b>				
<b>FY 2019</b>	<b>Hospital Submitted Quality Data and is a Meaningful EHR User</b>	<b>Hospital Submitted Quality Data and is NOT a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User</b>
Market Basket Rate-of-Increase	2.9	2.9	2.9	2.9
Adjustment for Failure to Submit Quality Data under Section 1886(b)(3)(B)(viii) of the Act	0	0	-0.725	-0.725
Adjustment for Failure to be a Meaningful EHR User under Section 1886(b)(3)(B)(ix) of the Act	0	-2.175	0	-2.175
MFP Adjustment under Section 1886(b)(3)(B)(xi) of the Act	-0.8	-0.8	-0.8	-0.8
Statutory Adjustment under Section 1886(b)(3)(B)(xii) of the Act	-0.75	-0.75	-0.75	-0.75
<b>Applicable Percentage Increase Applied to Standardized Amount</b>	<b>1.35</b>	<b>-0.825</b>	<b>0.625</b>	<b>-1.55</b>

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20382), we proposed to revise the existing regulations at 42 CFR 412.64(d) to reflect the current law for the FY 2019 update. Specifically, in accordance with section 1886(b)(3)(B) of the Act, we proposed to revise paragraph (vii) of § 412.64(d)(1) to include the applicable percentage increase to the FY 2019 operating standardized amount as the percentage increase in the market basket index, subject to the reductions specified under § 412.64(d)(2) for a

hospital that does not submit quality data and § 412.64(d)(3) for a hospital that is not a meaningful EHR user, less an MFP adjustment and less an additional reduction of 0.75 percentage point.

We did not receive any public comments on our proposed changes to the regulations at § 412.64(d)(1) and, therefore, are finalizing these proposed changes without modification in this final rule.

Section 1886(b)(3)(B)(iv) of the Act provides that the applicable percentage increase to the hospital-specific rates for SCHs and MDHs equals the applicable percentage increase set forth in section 1886(b)(3)(B)(i) of the Act (that is, the same update factor as for all other hospitals subject to the IPPS). Therefore, the update to the hospital-specific rates for SCHs and MDHs also is subject to section 1886(b)(3)(B)(i) of the Act, as amended by sections 3401(a) and 10319(a) of the Affordable Care Act. (As discussed in section IV.G. of the preamble of this FY 2019 IPPS/LTCH PPS final rule, section 205 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) (Pub. L. 114-10, enacted on April 16, 2015) extended the MDH program through FY 2017 (that is, for discharges occurring on or before September 30, 2017). Section 50205 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted February 9, 2018, extended the MDH program for discharges on or after October 1, 2017 through September 30, 2022.)

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20382), for FY 2019, we proposed the following updates to the hospital-specific rates applicable to SCHs and MDHs: a proposed update of 1.25 percent for a hospital that submits quality data and is a

meaningful EHR user; a proposed update of 0.55 percent for a hospital that fails to submit quality data and is a meaningful EHR user; a proposed update of -0.85 percent for a hospital that submits quality data and is not a meaningful EHR user; and a proposed update of -1.55 percent for a hospital that fails to submit quality data and is not a meaningful EHR user. As noted previously, for the FY 2019 IPPS/LTCH PPS proposed rule, we used IGI's fourth quarter 2017 forecast of the 2014-based IPPS market basket update with historical data through third quarter 2017. Similarly, we used IGI's fourth quarter 2017 forecast of the MFP adjustment. We proposed that if more recent data subsequently became available (for example, a more recent estimate of the market basket increase and the MFP adjustment), we would use such data, if appropriate, to determine the update in the final rule.

We did not receive any public comments with regard to our proposal. Therefore, we are finalizing the proposal to determine the update to the hospital-specific rates for SCHs and MDHs in this final rule using the most recent available data, specifically, IGI's second quarter 2018 forecast of the 2014-based IPPS market basket rate-of-increase and the MFP adjustment with historical data through the first quarter of 2018.

For this final rule, based on the most recent available data, we are finalizing the following updates to the hospital-specific rates applicable to SCHs and MDHs: an update of 1.35 percent for a hospital that submits quality data and is a meaningful EHR user; an update of 0.625 percent for a hospital that fails to submit quality data and is a meaningful EHR user; an update of -0.825 percent for a hospital that submits quality data and is not a

meaningful EHR user; and an update of –1.55 percent for a hospital that fails to submit quality data and is not a meaningful EHR user.

## 2. FY 2019 Puerto Rico Hospital Update

As discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56937 through 56938), prior to January 1, 2016, Puerto Rico hospitals were paid based on 75 percent of the national standardized amount and 25 percent of the Puerto Rico-specific standardized amount. Section 601 of Pub. L. 114-113 amended section 1886(d)(9)(E) of the Act to specify that the payment calculation with respect to operating costs of inpatient hospital services of a subsection (d) Puerto Rico hospital for inpatient hospital discharges on or after January 1, 2016, shall use 100 percent of the national standardized amount.

Because Puerto Rico hospitals are no longer paid with a Puerto Rico-specific standardized amount under the amendments to section 1886(d)(9)(E) of the Act, there is no longer a need for us to determine an update to the Puerto Rico standardized amount. Hospitals in Puerto Rico are now paid 100 percent of the national standardized amount and, therefore, are subject to the same update to the national standardized amount discussed under section IV.B.1. of the preamble of this final rule. Accordingly, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20382), for FY 2019, we proposed an applicable percentage increase of 1.25 percent to the standardized amount for hospitals located in Puerto Rico. We note that we did not receive any public comments with regard to our proposal. Based on the most recent data available for this final rule (as discussed in section IV.B.1. of the preamble of this final rule), we are finalizing an

applicable percentage increase of 1.35 percent to the standardized amount for hospitals located in Puerto Rico.

We note that section 1886(b)(3)(B)(viii) of the Act, which specifies the adjustment to the applicable percentage increase for “subsection (d)” hospitals that do not submit quality data under the rules established by the Secretary, is not applicable to hospitals located in Puerto Rico.

In addition, section 602 of Pub. L. 114-113 amended section 1886(n)(6)(B) of the Act to specify that Puerto Rico hospitals are eligible for incentive payments for the meaningful use of certified EHR technology, effective beginning FY 2016, and also to apply the adjustments to the applicable percentage increase under section 1886(b)(3)(B)(ix) of the Act to Puerto Rico hospitals that are not meaningful EHR users, effective FY 2022. Accordingly, because the provisions of section 1886(b)(3)(B)(ix) of the Act are not applicable to hospitals located in Puerto Rico until FY 2022, the adjustments under this provision are not applicable for FY 2019.

C. Rural Referral Centers (RRCs) Annual Updates to Case-Mix Index and Discharge Criteria (§ 412.96)

Under the authority of section 1886(d)(5)(C)(i) of the Act, the regulations at § 412.96 set forth the criteria that a hospital must meet in order to qualify under the IPPS as a rural referral center (RRC). RRCs receive some special treatment under both the DSH payment adjustment and the criteria for geographic reclassification.

Section 402 of Pub. L. 108-173 raised the DSH payment adjustment for RRCs such that they are not subject to the 12-percent cap on DSH payments that is applicable to

other rural hospitals. RRCs also are not subject to the proximity criteria when applying for geographic reclassification. In addition, they do not have to meet the requirement that a hospital's average hourly wage must exceed, by a certain percentage, the average hourly wage of the labor market area in which the hospital is located.

Section 4202(b) of Pub. L. 105-33 states, in part, that any hospital classified as an RRC by the Secretary for FY 1991 shall be classified as such an RRC for FY 1998 and each subsequent fiscal year. In the August 29, 1997 IPPS final rule with comment period (62 FR 45999), we reinstated RRC status for all hospitals that lost that status due to triennial review or MGCRB reclassification. However, we did not reinstate the status of hospitals that lost RRC status because they were now urban for all purposes because of the OMB designation of their geographic area as urban. Subsequently, in the August 1, 2000 IPPS final rule (65 FR 47089), we indicated that we were revisiting that decision. Specifically, we stated that we would permit hospitals that previously qualified as an RRC and lost their status due to OMB redesignation of the county in which they are located from rural to urban, to be reinstated as an RRC. Otherwise, a hospital seeking RRC status must satisfy all of the other applicable criteria. We use the definitions of "urban" and "rural" specified in Subpart D of 42 CFR Part 412. One of the criteria under which a hospital may qualify as an RRC is to have 275 or more beds available for use (§ 412.96(b)(1)(ii)). A rural hospital that does not meet the bed size requirement can qualify as an RRC if the hospital meets two mandatory prerequisites (a minimum case-mix index (CMI) and a minimum number of discharges), and at least one of three optional criteria (relating to specialty composition of medical staff, source of inpatients,

or referral volume). (We refer readers to § 412.96(c)(1) through (c)(5) and the September 30, 1988 **Federal Register** (53 FR 38513) for additional discussion.) With respect to the two mandatory prerequisites, a hospital may be classified as an RRC if--

- The hospital's CMI is at least equal to the lower of the median CMI for urban hospitals in its census region, excluding hospitals with approved teaching programs, or the median CMI for all urban hospitals nationally; and
- The hospital's number of discharges is at least 5,000 per year, or, if fewer, the median number of discharges for urban hospitals in the census region in which the hospital is located. The number of discharges criterion for an osteopathic hospital is at least 3,000 discharges per year, as specified in section 1886(d)(5)(C)(i) of the Act.

#### 1. Case-Mix Index (CMI)

Section 412.96(c)(1) provides that CMS establish updated national and regional CMI values in each year's annual notice of prospective payment rates for purposes of determining RRC status. The methodology we used to determine the national and regional CMI values is set forth in the regulations at § 412.96(c)(1)(ii). The national median CMI value for FY 2019 is based on the CMI values of all urban hospitals nationwide, and the regional median CMI values for FY 2019 are based on the CMI values of all urban hospitals within each census region, excluding those hospitals with approved teaching programs (that is, those hospitals that train residents in an approved GME program as provided in § 413.75). These values are based on discharges occurring during FY 2017 (October 1, 2016 through September 30, 2017), and include bills posted to CMS' records through March 2018.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20383), we proposed that, in addition to meeting other criteria, if rural hospitals with fewer than 275 beds are to qualify for initial RRC status for cost reporting periods beginning on or after October 1, 2018, they must have a CMI value for FY 2017 that is at least--

- 1.66185 (national--all urban); or
- The median CMI value (not transfer-adjusted) for urban hospitals (excluding hospitals with approved teaching programs as identified in § 413.75) calculated by CMS for the census region in which the hospital is located.

The proposed median CMI values by region were set forth in a table in the proposed rule (83 FR 20383). We stated in the proposed rule that we intended to update the proposed CMI values in the FY 2019 final rule to reflect the updated FY 2017 MedPAR file, which would contain data from additional bills received through March 2018.

We did not receive any public comments on our proposals.

Based on the latest available data (FY 2017 bills received through March 2018), in addition to meeting other criteria, if rural hospitals with fewer than 275 beds are to qualify for initial RRC status for cost reporting periods beginning on or after October 1, 2018, they must have a CMI value for FY 2017 that is at least:

- 1.6612 (national--all urban); or
- The median CMI value (not transfer-adjusted) for urban hospitals (excluding hospitals with approved teaching programs as identified in § 413.75) calculated by CMS for the census region in which the hospital is located.

The final CMI values by region are set forth in the following table.

<b>Region</b>	<b>Case-Mix Index Value</b>
1. New England (CT, ME, MA, NH, RI, VT)	1.4071
2. Middle Atlantic (PA, NJ, NY)	1.4701
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	1.5492
4. East North Central (IL, IN, MI, OH, WI)	1.5743
5. East South Central (AL, KY, MS, TN)	1.5293
6. West North Central (IA, KS, MN, MO, NE, ND, SD)	1.63935
7. West South Central (AR, LA, OK, TX)	1.6859
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	1.7366
9. Pacific (AK, CA, HI, OR, WA)	1.6613

A hospital seeking to qualify as an RRC should obtain its hospital-specific CMI value (not transfer-adjusted) from its MAC. Data are available on the Provider Statistical and Reimbursement (PS&R) System. In keeping with our policy on discharges, the CMI values are computed based on all Medicare patient discharges subject to the IPPS MS-DRG-based payment.

2. Discharges

Section 412.96(c)(2)(i) provides that CMS set forth the national and regional numbers of discharges criteria in each year’s annual notice of prospective payment rates for purposes of determining RRC status. As specified in section 1886(d)(5)(C)(ii) of the Act, the national standard is set at 5,000 discharges. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20384), for FY 2019, we proposed to update the regional standards based on discharges for urban hospitals’ cost reporting periods that began during FY 2016 (that is, October 1, 2015 through September 30, 2016), which were the latest

cost report data available at the time the proposed rule was developed. Therefore, we proposed that, in addition to meeting other criteria, a hospital, if it is to qualify for initial RRC status for cost reporting periods beginning on or after October 1, 2018, must have, as the number of discharges for its cost reporting period that began during FY 2016, at least--

- 5,000 (3,000 for an osteopathic hospital); or
- If less, the median number of discharges for urban hospitals in the census region in which the hospital is located. (We refer readers to the table set forth in the FY 2019 IPPS/LTCH PPS proposed rule at 83 FR 20384.) In the proposed rule, we stated that we intended to update these numbers in the FY 2019 final rule based on the latest available cost report data.

We did not receive any public comments on our proposals.

Based on the latest discharge data available at this time, that is, for cost reporting periods that began during FY 2016, the final median number of discharges for urban hospitals by census region are set forth in the following table.

<b>Region</b>	<b>Number of Discharges</b>
1. New England (CT, ME, MA, NH, RI, VT)	8,431
2. Middle Atlantic (PA, NJ, NY)	9,985
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	10,543
4. East North Central (IL, IN, MI, OH, WI)	8,297
5. East South Central (AL, KY, MS, TN)	8,131
6. West North Central (IA, KS, MN, MO, NE, ND, SD)	7,805
7. West South Central (AR, LA, OK, TX)	5,574
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	8,736

Region	Number of Discharges
9. Pacific (AK, CA, HI, OR, WA)	9,017

We note that because the median number of discharges for hospitals in each census region is greater than the national standard of 5,000 discharges, under this final rule, 5,000 discharges is the minimum criterion for all hospitals, except for osteopathic hospitals for which the minimum criterion is 3,000 discharges.

D. Payment Adjustment for Low-Volume Hospitals (§ 412.101)

1. Background

Section 1886(d)(12) of the Act provides for an additional payment to each qualifying low-volume hospital under the IPPS beginning in FY 2005. The additional payment adjustment to a low-volume hospital provided for under section 1886(d)(12) of the Act is in addition to any payment calculated under section 1886 of the Act.

Therefore, the additional payment adjustment is based on the per discharge amount paid to the qualifying hospital under section 1886 of the Act. In other words, the low-volume hospital payment adjustment is based on total per discharge payments made under section 1886 of the Act, including capital, DSH, IME, and outlier payments. For SCHs and MDHs, the low-volume hospital payment adjustment is based in part on either the Federal rate or the hospital-specific rate, whichever results in a greater operating IPPS payment.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20384), section 50204 of the Bipartisan Budget Act of 2018 (Pub. L. 115–123) modified the

definition of a low-volume hospital and the methodology for calculating the payment adjustment for low-volume hospitals for FYs 2019 through 2022. (Section 50204 also extended prior changes to the definition of a low-volume hospital and the methodology for calculating the payment adjustment for low-volume hospitals through FY 2018, as discussed later in this section.). Beginning with FY 2023, the low-volume hospital qualifying criteria and payment adjustment will revert to the statutory requirements that were in effect prior to FY 2011. (For additional information on the low-volume hospital payment adjustment prior to FY 2018, we refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56941 through 56943). For additional information on the low-volume hospital payment adjustment for FY 2018, we refer readers to the FY 2018 IPPS notice (CMS-1677-N) that appeared in the **Federal Register** on April 26, 2018 (83 FR 18301 through 18308). In section IV.D.2.b. of the preamble of the proposed rule and this final rule, we discuss the low-volume hospital payment adjustment policies for FY 2019.

## 2. Implementation of Changes to the Low-Volume Hospital Definition and Payment Adjustment Methodology made by the Bipartisan Budget Act of 2018

### a. Extension of the Temporary Changes to the Low-Volume Hospital Definition and Payment Adjustment Methodology for FY 2018 and Conforming Changes to Regulations

Section 50204 of the Bipartisan Budget Act of 2018 extended through FY 2018 certain changes to the low-volume hospital payment policy made by the Affordable Care Act and extended by subsequent legislation. We addressed this extension of the temporary changes to the low-volume hospital payment policy for FY 2018 in a notice that appeared in the **Federal Register** on April 26, 2018 (CMS-1677-N) (83 FR 18301

through 18308). However, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20384), we proposed to make conforming changes to the regulations text in § 412.101 to reflect the extension of the changes to the qualifying criteria and the payment adjustment methodology for low-volume hospitals through FY 2018, in accordance with section 50204 of the Bipartisan Budget Act of 2018. Specifically, we proposed to make conforming changes to paragraphs (b)(2)(ii) and (c)(2) introductory text of § 412.101 to reflect that the low-volume hospital payment adjustment policy in effect for FY 2018 is the same low-volume hospital payment adjustment policy in effect for FYs 2011 through 2017 (as described in the FY 2018 IPPS notice (CMS-1677-N; 83 FR 18301 through 18308).

We did not receive any public comments on our proposal. Therefore, we are finalizing, without modification, our proposed conforming changes to paragraphs (b)(2)(ii) and (c)(2) introductory text of § 412.101 to reflect that the low-volume hospital payment adjustment policy in effect for FY 2018 is the same low-volume hospital payment adjustment policy in effect for FYs 2011 through 2017.

**b. Temporary Changes to the Low-Volume Hospital Definition and Payment Adjustment Methodology for FYs 2019 through 2022**

As discussed earlier, section 50204 of the Bipartisan Budget Act of 2018 further modified the definition of a low-volume hospital and the methodology for calculating the payment adjustment for low-volume hospitals for FYs 2019 through 2022. Specifically, section 50204 amended the qualifying criteria for low-volume hospitals under section 1886(d)(12)(C)(i) of the Act to specify that, for FYs 2019 through 2022, a subsection (d)

hospital qualifies as a low-volume hospital if it is more than 15 road miles from another subsection (d) hospital and has less than 3,800 total discharges during the fiscal year. Section 50204 also amended section 1886(d)(12)(D) of the Act to provide that, for discharges occurring in FYs 2019 through 2022, the Secretary shall determine the applicable percentage increase using a continuous, linear sliding scale ranging from an additional 25 percent payment adjustment for low-volume hospitals with 500 or fewer discharges to a zero percent additional payment for low-volume hospitals with more than 3,800 discharges in the fiscal year. Consistent with the requirements of section 1886(d)(12)(C)(ii) of the Act, the term “discharge” for purposes of these provisions refers to total discharges, regardless of payer (that is, Medicare and non-Medicare discharges).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20385), to implement this requirement, we proposed a continuous, linear sliding scale formula to determine the low volume hospital payment adjustment for FYs 2019 through 2022 that is similar to the continuous, linear sliding scale formula used to determine the low-volume hospital payment adjustment originally established by the Affordable Care Act and implemented in the regulations at § 412.101(c)(2)(ii) in the FY 2011 IPPS/LTCH PPS final rule (75 FR 50240 through 50241). Consistent with the statute, we proposed that qualifying hospitals with 500 or fewer total discharges would receive a low-volume hospital payment adjustment of 25 percent. For qualifying hospitals with fewer than 3,800 discharges but more than 500 discharges, the low-volume payment adjustment would be calculated by subtracting from 25 percent the proportion of payments associated with the discharges in excess of 500. That proportion is calculated by multiplying the discharges

in excess of 500 by a fraction that is equal to the maximum available add-on payment (25 percent) divided by a number represented by the range of discharges for which this policy applies (3,800 minus 500, or 3,300). In other words, for qualifying hospitals with fewer than 3,800 total discharges but more than 500 total discharges, we proposed the low-volume hospital payment adjustment for FYs 2019 through 2022 would be calculated using the following formula:

$$\text{Low-Volume Hospital Payment Adjustment} = 0.25 - [0.25/3300] \times (\text{number of total discharges} - 500) = (95/330) - (\text{number of total discharges}/13,200).$$

As discussed below, the formula as presented in the preamble to the proposed rule (83 FR 20385) contained a typographical error, in that an “x” sign was used in place of a minus (“-”) sign, as follows:  $(95/330) \times (\text{number of total discharges}/13,200)$ . The formula set forth in the proposed regulatory text at § 412.101(c)(3)(ii) was correct, and we have also corrected the typographical error in the formula as presented in the preamble of this final rule.

To reflect these changes for FYs 2019 through 2022, we proposed to revise § 412.101(b)(2) by adding paragraph (iii) to specify that a hospital must have fewer than 3,800 total discharges, which includes Medicare and non-Medicare discharges, during the fiscal year, based on the hospital’s most recently submitted cost report, and be located more than 15 road miles from the nearest “subsection (d)” hospital, consistent with the amendments to section 1886(d)(12)(C)(i) of the Act as provided by section 50204(a)(2) of the Bipartisan Budget Act of 2018. We also proposed to add paragraph (3) to

§ 412.101(c), consistent with section 1886(d)(12)(D) of the Act as amended by section 50204(a)(3) of the Bipartisan Budget Act of 2018, to specify that:

- For low-volume hospitals with 500 or fewer total discharges during the fiscal year, the low-volume hospital payment adjustment is an additional 25 percent for each Medicare discharge.
- For low-volume hospitals with total discharges during the fiscal year of more than 500 and fewer than 3,800, the adjustment for each Medicare discharge is an additional percent calculated using the formula  $[(95/330) - (\text{number of total discharges}/13,200)]$ . (Similar to above, in the preamble to the proposed rule, we inadvertently included an “x” sign in place of a “-” sign in describing the formula that was specified in the text of proposed § 412.101(c)(3)(ii). As noted, the proposed regulatory text accurately reflected the proposed formula, and we have also corrected the typographical error in the formula as presented in the preamble of this final rule.)

In the proposed rule, we specified that the “number of total discharges” would be determined as total discharges, which includes Medicare and non-Medicare discharges during the fiscal year, based on the hospital’s most recently submitted cost report.

In addition, in accordance with the provisions of section 50204(a) of the Bipartisan Budget Act of 2018, for FY 2023 and subsequent fiscal years, we proposed to make conforming changes to paragraphs (b)(2)(i) and (c)(1) of § 412.101 to reflect that the low-volume payment adjustment policy in effect for these years is the same low-volume hospital payment adjustment policy in effect for FYs 2005 through 2010, as described earlier. Lastly, we proposed to make conforming changes to paragraph (d)

(which relates to eligibility of new hospitals for the adjustment), consistent with the provisions of section 50204(a) of the Bipartisan Budget Act of 2018, for FY 2019 and subsequent fiscal years, as total discharges are used under the low-volume hospital payment adjustment policy in effect for those years as described earlier.

Comment: Commenters noted a typographical error in the proposed low-volume hospital payment adjustment formula as presented in the preamble of the proposed rule. Many of these commenters also noted that the formula in proposed § 412.101(c)(3)(ii) was correct.

Response: We thank the commenters for pointing out this typographical error and, as indicated earlier, are correcting the formula as presented in the preamble of this final rule to read: Low-Volume Hospital Payment Adjustment =  $0.25 - [0.25/3300] \times (\text{number of total discharges} - 500) = (95/330) - (\text{number of total discharges}/13,200)$ .

After consideration of the public comments we received, we are finalizing, without modification, our proposed changes to § 412.101(b)(2), (c), and (d) to reflect the changes in the low-volume hospital payment policy provided by section 50204 of the Bipartisan Budget Act of 2018 as discussed in this section.

### 3. Process for Requesting and Obtaining the Low-Volume Hospital Payment Adjustment

In the FY 2011 IPPS/LTCH PPS final rule (75 FR 50238 through 50275 and 50414) and subsequent rulemaking (for example, the FY 2018 IPPS/LTCH PPS final rule (82 FR 38186 through 38188)), we discussed the process for requesting and obtaining the low-volume hospital payment adjustment. Under this previously established process, a hospital makes a written request for the low-volume payment adjustment under § 412.101

to its MAC. This request must contain sufficient documentation to establish that the hospital meets the applicable mileage and discharge criteria. The MAC will determine if the hospital qualifies as a low-volume hospital by reviewing the data the hospital submits with its request for low-volume hospital status in addition to other available data. Under this approach, a hospital will know in advance whether or not it will receive a payment adjustment under the low-volume hospital policy. The MAC and CMS may review available data, in addition to the data the hospital submits with its request for low-volume hospital status, in order to determine whether or not the hospital meets the qualifying criteria. (For additional information on our existing process for requesting the low-volume hospital payment adjustment, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38185 through 38188).)

As described in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20385), for FY 2019 and subsequent fiscal years, the discharge determination is made based on the hospital's number of total discharges, that is, Medicare and non-Medicare discharges, as was the case for FYs 2005 through 2010. Under § 412.101(b)(2)(i) and new § 412.101(b)(2)(iii), as proposed and finalized in this final rule, a hospital's most recently submitted cost report is used to determine if the hospital meets the discharge criterion to receive the low-volume payment adjustment in the current year. We use cost report data to determine if a hospital meets the discharge criterion because this is the best available data source that includes information on both Medicare and non-Medicare discharges. (For FYs 2011 through 2018, the most recently available MedPAR data were used to determine the hospital's Medicare discharges because non-Medicare discharges were not

used to determine if a hospital met the discharge criterion for those years.) Therefore, a hospital should refer to its most recently submitted cost report for total discharges (Medicare and non-Medicare) in order to decide whether or not to apply for low-volume hospital status for a particular fiscal year.

As also discussed in the FY 2019 IPPS/LTCH PPS proposed rule, in addition to the discharge criterion, for FY 2019 and for subsequent fiscal years, eligibility for the low-volume hospital payment adjustment is also dependent upon the hospital meeting the applicable mileage criterion specified in § 412.101(b)(2)(i) or proposed new § 412.101(b)(2)(iii) for the fiscal year (as noted in the previous section, we have finalized the amendments to § 412.101(b)(2) and new § 412.101(b)(2)(iii) as proposed). Specifically, to meet the mileage criterion to qualify for the low-volume hospital payment adjustment for FY 2019, as noted earlier, a hospital must be located more than 15 road miles from the nearest subsection (d) hospital. We define in § 412.101(a) the term “road miles” to mean “miles” as defined in § 412.92(c)(1) (75 FR 50238 through 50275 and 50414). For establishing that the hospital meets the mileage criterion, the use of a web-based mapping tool as part of the documentation is acceptable. The MAC will determine if the information submitted by the hospital, such as the name and street address of the nearest hospitals, location on a map, and distance from the hospital requesting low-volume hospital status, is sufficient to document that it meets the mileage criterion. If not, the MAC will follow up with the hospital to obtain additional necessary information to determine whether or not the hospital meets the applicable mileage criterion.

As explained in the proposed rule, in accordance with our previously established process, a hospital must make a written request for low-volume hospital status that is received by its MAC by September 1 immediately preceding the start of the Federal fiscal year for which the hospital is applying for low-volume hospital status in order for the applicable low-volume hospital payment adjustment to be applied to payments for its discharges for the fiscal year beginning on or after October 1 immediately following the request (that is, the start of the Federal fiscal year). For a hospital whose request for low-volume hospital status is received after September 1, if the MAC determines the hospital meets the criteria to qualify as a low-volume hospital, the MAC will apply the applicable low-volume hospital payment adjustment to determine payment for the hospital's discharges for the fiscal year, effective prospectively within 30 days of the date of the MAC's low-volume status determination.

Specifically, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20386), for FY 2019, we proposed that a hospital must submit a written request for low-volume hospital status to its MAC that includes sufficient documentation to establish that the hospital meets the applicable mileage and discharge criteria (as described earlier). Consistent with historical practice, for FY 2019, we proposed that a hospital's written request must be received by its MAC no later than September 1, 2018 in order for the low-volume hospital payment adjustment to be applied to payments for its discharges beginning on or after October 1, 2018. If a hospital's written request for low-volume hospital status for FY 2019 is received after September 1, 2018, and if the MAC determines the hospital meets the criteria to qualify as a low-volume hospital, the MAC

would apply the low-volume hospital payment adjustment to determine the payment for the hospital's FY 2019 discharges, effective prospectively within 30 days of the date of the MAC's low-volume hospital status determination.

Under this process, a hospital receiving the low-volume hospital payment adjustment for FY 2018 may continue to receive a low-volume hospital payment adjustment without reapplying if it continues to meet the mileage criterion (which remains unchanged for FY 2019) and it also meets the applicable discharge criterion as modified for FY 2019 (that is, 3,800 or fewer total discharges). In this case, a hospital's request can include a verification statement that it continues to meet the mileage criterion applicable for FY 2019. (Determination of meeting the discharge criterion is discussed earlier in this section.) We noted in the proposed rule that a hospital must continue to meet the applicable qualifying criteria as a low-volume hospital (that is, the hospital must meet the applicable discharge criterion and mileage criterion for the fiscal year) in order to receive the payment adjustment in that fiscal year; that is, low-volume hospital status is not based on a "one-time" qualification (75 FR 50238 through 50275).

Comment: Commenters generally supported CMS' proposals related to the process for requesting and obtaining the low-volume hospital payment adjustment for FY 2019. Some commenters requested clarity regarding the date used to establish the most recently submitted cost report as well as guidance regarding what information from the cost report should be used to determine the total number of discharges for purposes of the low-volume hospital payment adjustment in FY 2019 through 2022.

Response: Consistent with our process for determining whether a hospital met the discharge criterion for FYs 2005 through 2010, the most recently submitted cost report used to determine total discharges for the low-volume hospital payment policy is the most recently submitted cost report as of the date that the hospital submits its written request to the MAC, in accordance with the process discussed earlier in this section. In addition, the total discharges include only inpatient discharges as reported on Worksheet S-3, Part 1, Column 15, Line 1 in the current version of the cost report.

After consideration of the public comments we received, we are finalizing our proposals relating to the process for requesting and obtaining the low-volume hospital payment adjustment as described above, without modification.

#### E. Indirect Medical Education (IME) Payment Adjustment Factor (§ 412.105)

##### 1. IME Payment Adjustment Factor for FY 2019

Under the IPPS, an additional payment amount is made to hospitals with residents in an approved graduate medical education (GME) program in order to reflect the higher indirect patient care costs of teaching hospitals relative to nonteaching hospitals. The payment amount is determined by use of a statutorily specified adjustment factor. The regulations regarding the calculation of this additional payment, known as the IME adjustment, are located at § 412.105. We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51680) for a full discussion of the IME adjustment and IME adjustment factor. Section 1886(d)(5)(B)(ii)(XII) of the Act provides that, for discharges occurring during FY 2008 and fiscal years thereafter, the IME formula multiplier is 1.35. Accordingly, for discharges occurring during FY 2019, the formula multiplier is 1.35.

We estimate that application of this formula multiplier for the FY 2019 IME adjustment will result in an increase in IPPS payment of 5.5 percent for every approximately 10 percent increase in the hospital's resident-to-bed ratio.

We did not receive any comments regarding the IME adjustment factor, which, as noted earlier, is statutorily required. Accordingly, for discharges occurring during FY 2019, the IME formula multiplier is 1.35.

## 2. Technical Correction to Regulations at 42 CFR 412.105(f)(1)(vii)

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20386), in the regulation governing the IME payment adjustment at § 412.105(f)(1)(vii), we identified an inadvertent omission of a cross-reference relating to an adjustment to a hospital's full-time equivalent cap for a new medical residency training program. Section 412.105(f)(1)(vii) states that if a hospital establishes a new medical residency training program, as defined in § 413.79(l), the hospital's full-time equivalent cap may be adjusted in accordance with the provisions of § 413.79(e)(1) through (e)(4). However, there is a paragraph (e)(5) under § 413.79 that we have inadvertently omitted that applies to the regulation at § 412.105(f)(1)(vii). In the proposed regulation (83 FR 20567), we proposed to correct this omission by amending § 412.105 to remove the reference to "§§ 413.79(e)(1) through (e)(4)" and add in its place the reference "§ 413.79(e)" to make clear that the provisions of § 413.79(e)(1) through (e)(5) apply. This proposed revision was intended to correct the omission and was not intended to substantially change the underlying regulation.

We did not receive any public comments on this proposed technical correction to § 412.105, and therefore are finalizing it as was proposed in the proposed regulation.

### F. Payment Adjustment for Medicare Disproportionate Share Hospitals (DSHs) for FY 2019 (§ 412.106)

#### 1. General Discussion

Section 1886(d)(5)(F) of the Act provides for additional Medicare payments to subsection (d) hospitals that serve a significantly disproportionate number of low-income

patients. The Act specifies two methods by which a hospital may qualify for the Medicare disproportionate share hospital (DSH) adjustment. Under the first method, hospitals that are located in an urban area and have 100 or more beds may receive a Medicare DSH payment adjustment if the hospital can demonstrate that, during its cost reporting period, more than 30 percent of its net inpatient care revenues are derived from State and local government payments for care furnished to needy patients with low incomes. This method is commonly referred to as the “Pickle method.” The second method for qualifying for the DSH payment adjustment, which is the most common, is based on a complex statutory formula under which the DSH payment adjustment is based on the hospital’s geographic designation, the number of beds in the hospital, and the level of the hospital’s disproportionate patient percentage (DPP). A hospital’s DPP is the sum of two fractions: the “Medicare fraction” and the “Medicaid fraction.” The Medicare fraction (also known as the “SSI fraction” or “SSI ratio”) is computed by dividing the number of the hospital’s inpatient days that are furnished to patients who were entitled to both Medicare Part A and Supplemental Security Income (SSI) benefits by the hospital’s total number of patient days furnished to patients entitled to benefits under Medicare Part A. The Medicaid fraction is computed by dividing the hospital’s number of inpatient days furnished to patients who, for such days, were eligible for Medicaid, but were not entitled to benefits under Medicare Part A, by the hospital’s total number of inpatient days in the same period.

Because the DSH payment adjustment is part of the IPPS, the statutory references to “days” in section 1886(d)(5)(F) of the Act have been interpreted to apply only to

hospital acute care inpatient days. Regulations located at 42 CFR 412.106 govern the Medicare DSH payment adjustment and specify how the DPP is calculated as well as how beds and patient days are counted in determining the Medicare DSH payment adjustment. Under § 412.106(a)(1)(i), the number of beds for the Medicare DSH payment adjustment is determined in accordance with bed counting rules for the IME adjustment under § 412.105(b).

Section 3133 of the Patient Protection and Affordable Care Act, as amended by section 10316 of the same Act and section 1104 of the Health Care and Education Reconciliation Act (Pub. L. 111–152), added a section 1886(r) to the Act that modifies the methodology for computing the Medicare DSH payment adjustment. (For purposes of this final rule, we refer to these provisions collectively as section 3133 of the Affordable Care Act.) Beginning with discharges in FY 2014, hospitals that qualify for Medicare DSH payments under section 1886(d)(5)(F) of the Act receive 25 percent of the amount they previously would have received under the statutory formula for Medicare DSH payments. This provision applies equally to hospitals that qualify for DSH payments under section 1886(d)(5)(F)(i)(I) of the Act and those hospitals that qualify under the Pickle method under section 1886(d)(5)(F)(i)(II) of the Act.

The remaining amount, equal to an estimate of 75 percent of what otherwise would have been paid as Medicare DSH payments, reduced to reflect changes in the percentage of individuals who are uninsured, is available to make additional payments to each hospital that qualifies for Medicare DSH payments and that has uncompensated care. The payments to each hospital for a fiscal year are based on the hospital's amount

of uncompensated care for a given time period relative to the total amount of uncompensated care for that same time period reported by all hospitals that receive Medicare DSH payments for that fiscal year.

As provided by section 3133 of the Affordable Care Act, section 1886(r) of the Act requires that, for FY 2014 and each subsequent fiscal year, a subsection (d) hospital that would otherwise receive DSH payments made under section 1886(d)(5)(F) of the Act receives two separately calculated payments. Specifically, section 1886(r)(1) of the Act provides that the Secretary shall pay to such subsection (d) hospital (including a Pickle hospital) 25 percent of the amount the hospital would have received under section 1886(d)(5)(F) of the Act for DSH payments, which represents the empirically justified amount for such payment, as determined by the MedPAC in its March 2007 Report to Congress. We refer to this payment as the “empirically justified Medicare DSH payment.”

In addition to this empirically justified Medicare DSH payment, section 1886(r)(2) of the Act provides that, for FY 2014 and each subsequent fiscal year, the Secretary shall pay to such subsection (d) hospital an additional amount equal to the product of three factors. The first factor is the difference between the aggregate amount of payments that would be made to subsection (d) hospitals under section 1886(d)(5)(F) of the Act if subsection (r) did not apply and the aggregate amount of payments that are made to subsection (d) hospitals under section 1886(r)(1) of the Act for such fiscal year. Therefore, this factor amounts to 75 percent of the payments that would otherwise be made under section 1886(d)(5)(F) of the Act.

The second factor is, for FY 2018 and subsequent fiscal years, 1 minus the percent change in the percent of individuals who are uninsured, as determined by comparing the percent of individuals who were uninsured in 2013 (as estimated by the Secretary, based on data from the Census Bureau or other sources the Secretary determines appropriate, and certified by the Chief Actuary of CMS), and the percent of individuals who were uninsured in the most recent period for which data are available (as so estimated and certified), minus 0.2 percentage point for FYs 2018 and 2019.

The third factor is a percent that, for each subsection (d) hospital, represents the quotient of the amount of uncompensated care for such hospital for a period selected by the Secretary (as estimated by the Secretary, based on appropriate data), including the use of alternative data where the Secretary determines that alternative data are available which are a better proxy for the costs of subsection (d) hospitals for treating the uninsured, and the aggregate amount of uncompensated care for all subsection (d) hospitals that receive a payment under section 1886(r) of the Act. Therefore, this third factor represents a hospital's uncompensated care amount for a given time period relative to the uncompensated care amount for that same time period for all hospitals that receive Medicare DSH payments in the applicable fiscal year, expressed as a percent.

For each hospital, the product of these three factors represents its additional payment for uncompensated care for the applicable fiscal year. We refer to the additional payment determined by these factors as the "uncompensated care payment."

Section 1886(r) of the Act applies to FY 2014 and each subsequent fiscal year. In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50620 through 50647) and the FY 2014

IPPS interim final rule with comment period (78 FR 61191 through 61197), we set forth our policies for implementing the required changes to the Medicare DSH payment methodology made by section 3133 of the Affordable Care Act for FY 2014. In those rules, we noted that, because section 1886(r) of the Act modifies the payment required under section 1886(d)(5)(F) of the Act, it affects only the DSH payment under the operating IPPS. It does not revise or replace the capital IPPS DSH payment provided under the regulations at 42 CFR Part 412, subpart M, which were established through the exercise of the Secretary's discretion in implementing the capital IPPS under section 1886(g)(1)(A) of the Act.

Finally, section 1886(r)(3) of the Act provides that there shall be no administrative or judicial review under section 1869, section 1878, or otherwise of any estimate of the Secretary for purposes of determining the factors described in section 1886(r)(2) of the Act or of any period selected by the Secretary for the purpose of determining those factors. Therefore, there is no administrative or judicial review of the estimates developed for purposes of applying the three factors used to determine uncompensated care payments, or the periods selected in order to develop such estimates.

## 2. Eligibility for Empirically Justified Medicare DSH Payments and Uncompensated Care Payments

As explained earlier, the payment methodology under section 3133 of the Affordable Care Act applies to "subsection (d) hospitals" that would otherwise receive a DSH payment made under section 1886(d)(5)(F) of the Act. Therefore, hospitals must receive empirically justified Medicare DSH payments in a fiscal year in order to receive

an additional Medicare uncompensated care payment for that year. Specifically, section 1886(r)(2) of the Act states that, in addition to the payment made to a subsection (d) hospital under section 1886(r)(1) of the Act, the Secretary shall pay to such subsection (d) hospitals an additional amount. Because section 1886(r)(1) of the Act refers to empirically justified Medicare DSH payments, the additional payment under section 1886(r)(2) of the Act is limited to hospitals that receive empirically justified Medicare DSH payments in accordance with section 1886(r)(1) of the Act for the applicable fiscal year.

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50622) and the FY 2014 IPPS interim final rule with comment period (78 FR 61193), we provided that hospitals that are not eligible to receive empirically justified Medicare DSH payments in a fiscal year will not receive uncompensated care payments for that year. We also specified that we would make a determination concerning eligibility for interim uncompensated care payments based on each hospital's estimated DSH status for the applicable fiscal year (using the most recent data that are available). We indicated that our final determination on the hospital's eligibility for uncompensated care payments will be based on the hospital's actual DSH status at cost report settlement for that payment year.

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50622) and in the rulemaking for subsequent fiscal years, we have specified our policies for several specific classes of hospitals within the scope of section 1886(r) of the Act. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20388 and 20389), we discussed our specific policies with respect to the following hospitals:

- *Subsection (d) Puerto Rico hospitals* that are eligible for DSH payments also are eligible to receive empirically justified Medicare DSH payments and uncompensated care payments under the new payment methodology (78 FR 50623 and 79 FR 50006).

- *Maryland hospitals* are not eligible to receive empirically justified Medicare DSH payments and uncompensated care payments under the payment methodology of section 1886(r) of the Act because they are not paid under the IPPS. As discussed in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50007), effective January 1, 2014, the State of Maryland elected to no longer have Medicare pay Maryland hospitals in accordance with section 1814(b)(3) of the Act and entered into an agreement with CMS that Maryland hospitals would be paid under the Maryland All-Payer Model. As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20388), the performance period of the Maryland All-Payer Model is scheduled to end on December 31, 2018. However, since the proposed rule was issued, CMS and the State have entered into an agreement to govern payments to Maryland hospitals under a new payment model, the Maryland Total Cost of Care (TCOC) Model, which begins on January 1, 2019. Under both the Maryland All-Payer Model and the new Maryland TCOC Model, Maryland hospitals will not be paid under the IPPS in FY 2019, and will remain ineligible to receive empirically justified Medicare DSH payments and uncompensated care payments under section 1886(r) of the Act.

- *Sole community hospitals (SCHs) that are paid under their hospital-specific rate* are not eligible for Medicare DSH payments. SCHs that are paid under the IPPS Federal rate receive interim payments based on what we estimate and project their DSH

status to be prior to the beginning of the Federal fiscal year (based on the best available data at that time) subject to settlement through the cost report, and if they receive interim empirically justified Medicare DSH payments in a fiscal year, they also will receive interim uncompensated care payments for that fiscal year on a per discharge basis, subject as well to settlement through the cost report. Final eligibility determinations will be made at the end of the cost reporting period at settlement, and both interim empirically justified Medicare DSH payments and uncompensated care payments will be adjusted accordingly (78 FR 50624 and 79 FR 50007).

- *Medicare-dependent, small rural hospitals (MDHs)* are paid based on the IPPS Federal rate or, if higher, the IPPS Federal rate plus 75 percent of the amount by which the Federal rate is exceeded by the updated hospital-specific rate from certain specified base years (76 FR 51684). The IPPS Federal rate that is used in the MDH payment methodology is the same IPPS Federal rate that is used in the SCH payment methodology. Section 50205 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted on February 9, 2018, extended the MDH program for discharges on or after October 1, 2017, through September 30, 2022. Because MDHs are paid based on the IPPS Federal rate, they continue to be eligible to receive empirically justified Medicare DSH payments and uncompensated care payments if their DPP is at least 15 percent, and we apply the same process to determine MDHs' eligibility for empirically justified Medicare DSH and uncompensated care payments as we do for all other IPPS hospitals. Due to the extension of the MDH program, MDHs will continue to be paid based on the IPPS Federal rate or, if higher, the IPPS Federal rate plus 75 percent of the amount by

which the Federal rate is exceeded by the updated hospital-specific rate from certain specified base years. Accordingly, we will continue to make a determination concerning eligibility for interim uncompensated care payments based on each hospital's estimated DSH status for the applicable fiscal year (using the most recent data that are available). Our final determination on the hospital's eligibility for uncompensated care payments will be based on the hospital's actual DSH status at cost report settlement for that payment year. In addition, as we do for all IPPS hospitals, we will calculate a numerator for Factor 3 for all MDHs, regardless of whether they are projected to be eligible for Medicare DSH payments during the fiscal year, but the denominator for Factor 3 will be based on the uncompensated care data from the hospitals that we have projected to be eligible for Medicare DSH payments during the fiscal year.

- *IPPS hospitals that elect to participate in the Bundled Payments for Care Improvement Advanced Initiative (BPCI Advanced) model starting October 1, 2018*, will continue to be paid under the IPPS and, therefore, are eligible to receive empirically justified Medicare DSH payments and uncompensated care payments. For further information regarding the BPCI Advanced model, we refer readers to the CMS website at: <https://innovation.cms.gov/initiatives/bpci-advanced/>.

- *IPPS hospitals that are participating in the Comprehensive Care for Joint Replacement Model (80 FR 73300)* continue to be paid under the IPPS and, therefore, are eligible to receive empirically justified Medicare DSH payments and uncompensated care payments.

- *Hospitals participating in the Rural Community Hospital Demonstration*

*Program* are not eligible to receive empirically justified Medicare DSH payments and uncompensated care payments under section 1886(r) of the Act because they are not paid under the IPPS (78 FR 50625 and 79 FR 50008). The Rural Community Hospital Demonstration Program was originally authorized for a 5-year period by section 410A of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) (Pub. L. 108–173), and extended for another 5-year period by sections 3123 and 10313 of the Affordable Care Act (Pub. L. 114–255). The period of performance for this 5-year extension period ended December 31, 2016. Section 15003 of the 21st Century Cures Act (Pub. L. 114–255), enacted December 13, 2016, again amended section 410A of Pub. L. 108–173 to require a 10-year extension period (in place of the 5-year extension required by the Affordable Care Act), therefore requiring an additional 5-year participation period for the demonstration program. Section 15003 of Pub. L. 114-255 also required a solicitation for applications for additional hospitals to participate in the demonstration program. At the time of issuance of the proposed rule, there were 30 hospitals participating in the demonstration program (83 FR 20389). Since issuance of the proposed rule, one hospital has withdrawn from the demonstration program. Under the payment methodology that applies during the second 5 years of the extension period under the demonstration program, participating hospitals do not receive empirically justified Medicare DSH payments, and they are also excluded from receiving interim and final uncompensated care payments.

### 3. Empirically Justified Medicare DSH Payments

As we have discussed earlier, section 1886(r)(1) of the Act requires the Secretary to pay 25 percent of the amount of the Medicare DSH payment that would otherwise be made under section 1886(d)(5)(F) of the Act to a subsection (d) hospital. Because section 1886(r)(1) of the Act merely requires the program to pay a designated percentage of these payments, without revising the criteria governing eligibility for DSH payments or the underlying payment methodology, we stated in the FY 2014 IPPS/LTCH PPS final rule that we did not believe that it was necessary to develop any new operational mechanisms for making such payments. Therefore, in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50626), we implemented this provision by advising MACs to simply adjust the interim claim payments to the requisite 25 percent of what would have otherwise been paid. We also made corresponding changes to the hospital cost report so that these empirically justified Medicare DSH payments can be settled at the appropriate level at the time of cost report settlement. We provided more detailed operational instructions and cost report instructions following issuance of the FY 2014 IPPS/LTCH PPS final rule that are available on the CMS website at:

<http://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/2014-Transmittals-Items/R5P240.html>.

### 4. Uncompensated Care Payments

As we discussed earlier, section 1886(r)(2) of the Act provides that, for each eligible hospital in FY 2014 and subsequent years, the uncompensated care payment is the product of three factors. These three factors represent our estimate of 75 percent of

the amount of Medicare DSH payments that would otherwise have been paid, an adjustment to this amount for the percent change in the national rate of uninsurance compared to the rate of uninsurance in 2013, and each eligible hospital's estimated uncompensated care amount relative to the estimated uncompensated care amount for all eligible hospitals. Below we discuss the data sources and methodologies for computing each of these factors, our final policies for FYs 2014 through 2018, and our proposed and final policies for FY 2019.

a. Calculation of Factor 1 for FY 2019

Section 1886(r)(2)(A) of the Act establishes Factor 1 in the calculation of the uncompensated care payment. Section 1886(r)(2)(A) of the Act states that this factor is equal to the difference between: (1) the aggregate amount of payments that would be made to subsection (d) hospitals under section 1886(d)(5)(F) of the Act if section 1886(r) of the Act did not apply for such fiscal year (as estimated by the Secretary); and (2) the aggregate amount of payments that are made to subsection (d) hospitals under section 1886(r)(1) of the Act for such fiscal year (as so estimated). Therefore, section 1886(r)(2)(A)(i) of the Act represents the estimated Medicare DSH payments that would have been made under section 1886(d)(5)(F) of the Act if section 1886(r) of the Act did not apply for such fiscal year. Under a prospective payment system, we would not know the precise aggregate Medicare DSH payment amount that would be paid for a Federal fiscal year until cost report settlement for all IPPS hospitals is completed, which occurs several years after the end of the Federal fiscal year. Therefore, section 1886(r)(2)(A)(i) of the Act provides authority to estimate this amount, by specifying that, for each fiscal

year to which the provision applies, such amount is to be estimated by the Secretary. Similarly, section 1886(r)(2)(A)(ii) of the Act represents the estimated empirically justified Medicare DSH payments to be made in a fiscal year, as prescribed under section 1886(r)(1) of the Act. Again, section 1886(r)(2)(A)(ii) of the Act provides authority to estimate this amount.

Therefore, Factor 1 is the difference between our estimates of: (1) the amount that would have been paid in Medicare DSH payments for the fiscal year, in the absence of the new payment provision; and (2) the amount of empirically justified Medicare DSH payments that are made for the fiscal year, which takes into account the requirement to pay 25 percent of what would have otherwise been paid under section 1886(d)(5)(F) of the Act. In other words, this factor represents our estimate of 75 percent (100 percent minus 25 percent) of our estimate of Medicare DSH payments that would otherwise be made, in the absence of section 1886(r) of the Act, for the fiscal year.

As we did for FY 2018, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20389), in order to determine Factor 1 in the uncompensated care payment formula for FY 2019, we proposed to continue the policy established in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50628 through 50630) and in the FY 2014 IPPS interim final rule with comment period (78 FR 61194) of determining Factor 1 by developing estimates of both the aggregate amount of Medicare DSH payments that would be made in the absence of section 1886(r)(1) of the Act and the aggregate amount of empirically justified Medicare DSH payments to hospitals under 1886(r)(1) of the Act.

These estimates will not be revised or updated after we know the final Medicare DSH payments for FY 2019.

Therefore, in order to determine the two elements of proposed Factor 1 for FY 2019 (Medicare DSH payments *prior* to the application of section 1886(r)(1) of the Act, and empirically justified Medicare DSH payments *after* application of section 1886(r)(1) of the Act), for the proposed rule, we used the most recently available projections of Medicare DSH payments for the fiscal year, as calculated by CMS' Office of the Actuary using the most recently filed Medicare hospital cost reports with Medicare DSH payment information and the most recent Medicare DSH patient percentages and Medicare DSH payment adjustments provided in the IPPS Impact File. The determination of the amount of DSH payments is partially based on the Office of the Actuary's Part A benefits projection model. One of the results of this model is inpatient hospital spending. Projections of DSH payments require projections for expected increases in utilization and case-mix. The assumptions that were used in making these projections and the resulting estimates of DSH payments for FY 2016 through FY 2019 are discussed in the table titled "Factors Applied for FY 2016 through FY 2019 to Estimate Medicare DSH Expenditures Using FY 2015 Baseline."

For purposes of calculating Factor 1 and modeling the impact of the FY 2019 IPPS/LTCH PPS proposed rule, we used the Office of the Actuary's December 2017 Medicare DSH estimates, which were based on data from the September 2017 update of the Medicare Hospital Cost Report Information System (HCRIS) and the FY 2018 IPPS/LTCH PPS final rule IPPS Impact file, published in conjunction with the

publication of the FY 2018 IPPS/LTCH PPS final rule. (We note that the proposed rule included an inadvertent reference to the HCRIS December 2017 update, which we have corrected in this final rule to reflect the September 2017 update of HCRIS, which was used by OACT in developing the December 2017 estimates. The cost report data from the December quarterly update were not available to be used in OACT's December 2017 estimates of Medicare DSH payments.) Because SCHs that are projected to be paid under their hospital-specific rate are excluded from the application of section 1886(r) of the Act, these hospitals also were excluded from the December 2017 Medicare DSH estimates. Furthermore, because section 1886(r) of the Act specifies that the uncompensated care payment is in addition to the empirically justified Medicare DSH payment (25 percent of DSH payments that would be made without regard to section 1886(r) of the Act), Maryland hospitals, which are not eligible to receive DSH payments, were also excluded from the Office of the Actuary's December 2017 Medicare DSH estimates. The 30 hospitals that were then participating in the Rural Community Hospital Demonstration Program were also excluded from these estimates because, under the payment methodology that applies during the second 5 years of the extension period, these hospitals are not eligible to receive empirically justified Medicare DSH payments or interim and final uncompensated care payments.

For the proposed rule, using the data sources discussed above, the Office of the Actuary's December 2017 estimate for Medicare DSH payments for FY 2019, without regard to the application of section 1886(r)(1) of the Act, was approximately \$16.295 billion. Therefore, also based on the December 2017 estimate, the estimate of

empirically justified Medicare DSH payments for FY 2019, with the application of section 1886(r)(1) of the Act, was approximately \$4.074 billion (or 25 percent of the total amount of estimated Medicare DSH payments for FY 2019). Under § 412.106(g)(1)(i) of the regulations, Factor 1 is the difference between these two estimates of the Office of the Actuary. Therefore, in the proposed rule, we proposed that Factor 1 for FY 2019 would be \$12,221,027,954.62, which is equal to 75 percent of the total amount of estimated Medicare DSH payments for FY 2019 (\$16,294,703,939.49 minus \$4,073,675,984.87).

Comment: Some commenters requested greater transparency in the methodology used by CMS and the OACT, particularly with respect to the calculation of estimated DSH payments for purposes of determining Factor 1, and the “Other” factors that are used to estimate Medicare DSH expenditures. A number of commenters urged CMS to provide a detailed explanation, including calculations, of the assumptions used to make these projections. Some commenters believed that the lack of opportunity afforded to hospitals to review the data used in rulemaking is in violation of the Administrative Procedure Act. Specifically, the commenters noted that the update factors used to derive the estimated DSH payment for FY 2019 were different from the factors used in previous years, but the changes were not addressed by CMS in the proposed rule. The commenters also noted that they have not had the opportunity to comment on the extrapolation of the 2015 DSH data and the way in which Medicaid expansion was accounted for in the DSH payment impact, or on any adjustments made to the data.

Some commenters expressed concern about whether underreporting of Medicaid coverage was factored into the calculation of Factor 1, as it was for Factor 2. The

commenters noted that, in the proposed rule, CMS did not explain why OACT assumed that there is an underreporting of Medicaid coverage due to “a perceived stigma associated with being enrolled in the Medicaid program or confusion about the source of health insurance.” The commenters further stated that the proposed rule did not indicate that the same presumption was also applied to the calculation of Factor 1. Many commenters provided examples of other assumptions made by OACT for which CMS did not provide information in rulemaking to explain the basis for or the data used to make the assumptions. The commenters believed that, given the information available to CMS, such as enrollment and utilization information from States that have expanded Medicaid and recently released reports that concluded that the Affordable Care Act had insured fewer individuals than previously estimated (CBO September 2017 report; President’s 2018 Economic Report), coverage levels were lower than estimated by CMS; and therefore, DSH payments to hospitals were suppressed. The commenters requested that CMS implement a system to reconcile uncompensated care payments once later data on Medicare DSH payments are available. One commenter thanked CMS for providing a table listing hospital-specific estimated uncompensated care payments and other DSH-related information for FY 2019. Another commenter suggested that, as CMS is permitting revisions to Factor 3, the agency consider completing reconciliation for Factor 1 and Factor 2. The commenter recognized that there are issues pertaining to completing reconciliation for all three factors, such as the determination of when to finalize all cost reports, but suggested using a methodology similar to the one used to

determine the wage index by using prior years' data for settlement of a future year and developing time tables for submissions and revisions to the data.

Response: We thank the commenters for their input. For the reasons discussed below, we have been and continue to be transparent with respect to the methodology and data used to estimate Factor 1 and we disagree with commenters who assert otherwise. Regarding the commenters who reference the Administrative Procedure Act, we note that under the Administrative Procedure Act, a proposed rule is required to include either the terms or substance of the proposed rule or a description of the subjects and issues involved. In this case, the FY 2019 IPPS/LTCH PPS proposed rule did include a detailed discussion of our proposed Factor 1 methodology and the data sources that would be used in making our estimate.

To provide context, we first note that Factor 1 is not estimated in isolation from other OACT projections. The Factor 1 estimates for proposed rules are generally consistent with the economic assumptions and actuarial analysis used to develop the President's Budget estimates under current law, and the Factor 1 estimates for the final rule are generally consistent with those used for the Midsession Review of the President's Budget. As we have in the past, for additional information on the development of the President's Budget, we refer readers to the Office of Management and Budget Web site at: <https://www.whitehouse.gov/omb/budget>. For additional information on the specific economic assumptions used in the Midsession Review of the President's FY 2019 Budget, we refer readers to the "Midsession Review of the President's FY 2019 Budget" available on the Office of Management and Budget Web site at:

<https://www.whitehouse.gov/omb/budget>. We recognize that our reliance on the economic assumptions and actuarial analysis used to develop the President's Budget and the Midsession Review of the President's Budget in estimating Factor 1 has an impact on stakeholders who wish to replicate the Factor 1 calculation, such as modelling the relevant Medicare Part A portion of the budget, but we believe commenters are able to meaningfully comment on our proposed estimate of Factor 1 without replicating the budget.

For a general overview of the principal steps involved in projecting future inpatient costs and utilization, we refer readers to the "2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds" available on the CMS Web site at:

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/index.html?redirect=/reportstrustfunds/> under "Downloads."

We note that the annual reports of the Medicare Boards of Trustees to Congress represent the Federal Government's official evaluation of the financial status of the Medicare Program. The actuarial projections contained in these reports are based on numerous assumptions regarding future trends in program enrollment, utilization and costs of health care services covered by Medicare, as well as other factors affecting program expenditures. In addition, although the methods used to estimate future costs based on these assumptions are complex, they are subject to periodic review by independent experts to ensure their validity and reasonableness.

We also refer the public to the Actuarial Report on the Financial Outlook for Medicaid for a discussion of general issues regarding Medicaid projections.

Second, as described in more detail later in this section, in the FY 2019 IPPS/LTCH PPS proposed rule, we included information regarding the data sources, methods, and assumptions employed by the actuaries in determining the OACT's estimate of Factor 1. In summary, we indicated the historical HCRIS data update OACT used to identify Medicare DSH payments, we explained that the most recent Medicare DSH payment adjustments provided in the IPPS Impact File were used, and we provided the components of all the update factors that were applied to the historical data to estimate the Medicare DSH payments for the upcoming fiscal year, along with the associated rationale and assumptions. This discussion also included a description of the "Other" and "Discharges" assumptions, and also provided additional information regarding how we address the Medicaid and CHIP expansion. Thus, for example, in response to the commenters' assertion that Medicaid expansion is not adequately accounted for in the "Other" column, we note that the discussion in the proposed rule made clear that, based on data from the Midsession Review of the President's Budget, the OACT assumed per capita spending for Medicaid beneficiaries who enrolled due to the expansion to be 50 percent of the average per capita expenditures for a preexpansion Medicaid beneficiary due to the better health of these beneficiaries. Taken as a whole, this description of our proposed methodology for estimating Factor 1 and the data sources used in making this estimate was entirely consistent with the requirements of the

Administrative Procedure Act, and gave stakeholders adequate notice of and a meaningful opportunity to comment on the proposed estimate of Factor 1.

Regarding the commenters' assertion that, similar to the adjustment for Medicaid underreporting on survey data in the estimation of Factor 2, we should also account for this underreporting in our estimate of Factor 1, we note that the Factor 1 calculation uses Medicaid enrollment data and estimates and does not require the adjustment because it does not use survey data.

Lastly, regarding the commenters' suggestion that CMS consider reconciling the estimates of Factors 1, 2, and 3, we continue to believe that applying our best estimates prospectively is most conducive to administrative efficiency, finality, and predictability in payments (78 FR 50628; 79 FR 50010; 80 FR 49518; 81 FR 56949; and 82 FR 38195). We believe that, in affording the Secretary the discretion to estimate the three factors used to determine uncompensated care payments and by including a prohibition against administrative and judicial review of those estimates in section 1886(r)(3) of the Act, Congress recognized the importance of finality and predictability under a prospective payment system. As a result, we do not agree with the commenters' suggestion that we should establish a process for reconciling our estimates of the three factors, which would be contrary to the notion of prospectivity. We also address comments specifically requesting that we establish procedures for reconciling Factor 3 later in this section, as part of the discussion of the comments received on the proposed methodology for Factor 3.

After consideration of the public comments we received, we are finalizing, as proposed, the methodology for calculating Factor 1 for FY 2019. We discuss the resulting Factor 1 amount for FY 2019 below.

For this final rule, the OACT used the most recently submitted Medicare cost report data from the March 2018 update of HCIRS to identify Medicare DSH payments and the most recent Medicare DSH payment adjustments provided in the Impact File published in conjunction with the publication of the FY 2018 IPPS/LTCH PPS final rule and applied update factors and assumptions for future changes in utilization and case-mix to estimate Medicare DSH payments for the upcoming fiscal year. The June 2018 OACT estimate for Medicare DSH payments for FY 2019, without regard to the application of section 1886(r)(1) of the Act, was approximately \$16.339 billion. This estimate excluded Maryland hospitals participating in the Maryland All-Payer Model, hospitals participating in the Rural Community Hospital Demonstration, and SCHs paid under their hospital-specific payment rate. Therefore, based on the June 2018 estimate, the estimate of empirically justified Medicare DSH payments for FY 2019, with the application of section 1886(r)(1) of the Act, was approximately \$4.085 billion (or 25 percent of the total amount of estimated Medicare DSH payments for FY 2019). Under § 412.106(g)(1)(i) of the regulations, Factor 1 is the difference between these two estimates of the OACT. Therefore, in this final rule, Factor 1 for FY 2019 is \$12,254,291,878.57, which is equal to 75 percent of the total amount of estimated Medicare DSH payments for FY 2019 (\$16,339,055,838.09 minus \$4,084,763,959.52).

The Office of the Actuary’s final estimates for FY 2019 began with a baseline of \$13.230 billion in Medicare DSH expenditures for FY 2015. The following table shows the factors applied to update this baseline through the current estimate for FY 2019:

<b>Factors Applied for FY 2016 through FY 2019 to Estimate Medicare DSH Expenditures Using FY 2015 Baseline</b>						
<b>FY</b>	<b>Update</b>	<b>Discharges</b>	<b>Case-Mix</b>	<b>Other</b>	<b>Total</b>	<b>Estimated DSH Payment (in billions)*</b>
2016	1.009	0.9864	1.031	1.0443	1.071589	14.177
2017	1.0015	0.9931	1.004	1.0662	1.064673	15.094
2018	1.018088	0.9892	1.02	1.0277	1.055689	15.935
2019	1.0185	1.0014	1.005	1.00035	1.025384	16.339

\*Rounded.

In this table, the discharges column shows the increase in the number of Medicare fee-for-service (FFS) inpatient hospital discharges. The figures for FY 2016 and FY 2017 are based on Medicare claims data that have been adjusted by a completion factor. The discharge figure for FY 2018 is based on preliminary data for 2018. The discharge figure for FY 2019 is an assumption based on recent trends recovering back to the long-term trend and assumptions related to how many beneficiaries will be enrolled in Medicare Advantage (MA) plans. The case-mix column shows the increase in case-mix for IPPS hospitals. The case-mix figures for FY 2016 and FY 2017 are based on actual data adjusted by a completion factor. The FY 2018 increase is based on preliminary data. The FY 2019 increase is an estimate based on the recommendation of the 2010-2011 Medicare Technical Review Panel. The “Other” column shows the increase in other factors that contribute to the Medicare DSH estimates. These factors include the difference between the total inpatient hospital discharges and the IPPS discharges, and

various adjustments to the payment rates that have been included over the years but are not reflected in the other columns (such as the change in rates for the 2-midnight stay policy). In addition, the “Other” column includes a factor for the Medicaid expansion due to the Affordable Care Act. The factor for Medicaid expansion was developed using public information and statements for each State regarding its intent to implement the expansion. Based on this information, it is assumed that 50 percent of all individuals who were potentially newly eligible Medicaid enrollees in 2016 resided in States that had elected to expand Medicaid eligibility and, for 2017 and thereafter, that 55 percent of such individuals would reside in expansion States. In the future, these assumptions may change based on actual participation by States. For a discussion of general issues regarding Medicaid projections, we refer readers to the 2016 Actuarial Report on the Financial Outlook for Medicaid, which is available on the CMS website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/ActuarialStudies/Downloads/MedicaidReport2016.pdf> . We note that, in developing their estimates of the effect of Medicaid expansion on Medicare DSH expenditures, our actuaries have assumed that the new Medicaid enrollees are healthier than the average Medicaid recipient and, therefore, use fewer hospital services. Specifically, based on data from the Mid-Session Review of the President’s Budget, the OACT assumed per capita spending for Medicaid beneficiaries who enrolled due to the expansion to be 50 percent of the average per capita expenditures for a pre-expansion Medicaid beneficiary due to the better health of these beneficiaries. This assumption is

consistent with recent internal estimates of Medicaid per capita spending pre-expansion and post-expansion.

The table below shows the factors that are included in the “Update” column of the above table:

<b>FY</b>	<b>Market Basket Percentage</b>	<b>Affordable Care Act Payment Reductions</b>	<b>Multifactor Productivity Adjustment</b>	<b>Documentation and Coding</b>	<b>Total Update Percentage</b>
2016	2.4	-0.2	-0.5	-0.8	0.9
2017	2.7	-0.75	-0.3	-1.5	0.15
2018	2.7	-0.75	-0.6	0.4588	1.8088
2019	2.9	-0.75	-0.8	0.5	1.85

Note: All numbers are based on the Midsession Review of FY 2019 President’s Budget projections.

b. Calculation of Factor 2 for FY 2019

(1) Background

Section 1886(r)(2)(B) of the Act establishes Factor 2 in the calculation of the uncompensated care payment. Specifically, section 1886(r)(2)(B)(i) of the Act provides that, for each of FYs 2014, 2015, 2016, and 2017, a factor equal to 1 minus the percent change in the percent of individuals under the age of 65 who are uninsured, as determined by comparing the percent of such individuals (1) who were uninsured in 2013, the last year before coverage expansion under the Affordable Care Act (as calculated by the Secretary based on the most recent estimates available from the Director of the Congressional Budget Office before a vote in either House on the Health Care and Education Reconciliation Act of 2010 that, if determined in the affirmative, would clear such Act for enrollment); and (2) who are uninsured in the most recent period for which

data are available (as so calculated), minus 0.1 percentage point for FY 2014 and minus 0.2 percentage point for each of FYs 2015, 2016, and 2017.

Section 1886(r)(2)(B)(ii) of the Act permits the use of a data source other than the CBO estimates to determine the percent change in the rate of uninsurance beginning in FY 2018. In addition, for FY 2018 and subsequent years, the statute does not require that the estimate of the percent of individuals who are uninsured be limited to individuals who are under 65. Specifically, the statute states that, for FY 2018 and subsequent fiscal years, the second factor is 1 minus the percent change in the percent of individuals who are uninsured, as determined by comparing the percent of individuals who were uninsured in 2013 (as estimated by the Secretary, based on data from the Census Bureau or other sources the Secretary determines appropriate, and certified by the Chief Actuary of CMS) and the percent of individuals who were uninsured in the most recent period for which data are available (as so estimated and certified), minus 0.2 percentage point for FYs 2018 and 2019.

## (2) Methodology for Calculation of Factor 2 for FY 2019

As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38197), in our analysis of a potential data source for the rate of uninsurance for purposes of computing Factor 2 in FY 2018, we considered the following: (a) the extent to which the source accounted for the full U.S. population; (b) the extent to which the source comprehensively accounted for both public and private health insurance coverage in deriving its estimates of the number of uninsured; (c) the extent to which the source utilized data from the Census Bureau; (d) the timeliness of the estimates; (e) the

continuity of the estimates over time; (f) the accuracy of the estimates; and (g) the availability of projections (including the availability of projections using an established estimation methodology that would allow for calculation of the rate of uninsurance for the applicable Federal fiscal year). As we explained in the FY 2018 IPPS/LTCH PPS final rule, these considerations are consistent with the statutory requirement that this estimate be based on data from the Census Bureau or other sources the Secretary determines appropriate and help to ensure the data source will provide reasonable estimates for the rate of uninsurance that are available in conjunction with the IPPS rulemaking cycle. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20391), we proposed to use the same methodology as was used in FY 2018 to determine Factor 2 for FY 2019.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38197 and 38198), we explained that we determined the source that, on balance, best meets all of these considerations is the uninsured estimates produced by CMS' Office of the Actuary (OACT) as part of the development of the National Health Expenditure Accounts (NHEA). The NHEA represents the government's official estimates of economic activity (spending) within the health sector. The information contained in the NHEA has been used to study numerous topics related to the health care sector, including, but not limited to, changes in the amount and cost of health services purchased and the payers or programs that provide or purchase these services; the economic causal factors at work in the health sector; the impact of policy changes, including major health reform; and comparisons to other countries' health spending. Of relevance to the determination of

Factor 2 is that the comprehensive and integrated structure of the NHEA creates an ideal tool for evaluating changes to the health care system, such as the mix of the insured and uninsured because this mix is integral to the well-established NHEA methodology.

Below we describe some aspects of the methodology used to develop the NHEA that were particularly relevant in estimating the percent change in the rate of uninsurance for FY 2018 and that we believe continue to be relevant in developing the estimate for FY 2019. A full description of the methodology used to develop the NHEA is available on the CMS website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/DSM-15.pdf>.

The NHEA estimates of U.S. population reflect the Census Bureau's definition of the resident-based population, which includes all people who usually reside in the 50 States or the District of Columbia, but excludes residents living in Puerto Rico and areas under U.S. sovereignty, members of the U.S. Armed Forces overseas, and U.S. citizens whose usual place of residence is outside of the United States, plus a small (typically less than 0.2 percent of population) adjustment to reflect Census undercounts. In past years, the estimates for Factor 2 were made using the CBO's uninsured population estimates for the under 65 population. For FY 2018 and subsequent years, the statute does not restrict the estimate to the measurement of the percent of individuals under the age of 65 who are uninsured. Accordingly, as we explained in the FY 2018 IPPS/LTCH PPS proposed and final rules, we believe it is appropriate to use an estimate that reflects the rate of uninsurance in the United States across all age groups. In addition, we continue to

believe that a resident-based population estimate more fully reflects the levels of uninsurance in the United States that influence uncompensated care for hospitals than an estimate that reflects only legal residents. The NHEA estimates of uninsurance are for the total U.S. population (all ages) and not by specific age cohort, such as the population under the age of 65.

The NHEA includes comprehensive enrollment estimates for total private health insurance (PHI) (including direct and employer-sponsored plans), Medicare, Medicaid, the Children's Health Insurance Program (CHIP), and other public programs, and estimates of the number of individuals who are uninsured. Estimates of total PHI enrollment are available for 1960 through 2016, estimates of Medicaid, Medicare, and CHIP enrollment are available for the length of the respective programs, and all other estimates (including the more detailed estimates of direct-purchased and employer-sponsored insurance) are available for 1987 through 2016. The NHEA data are publicly available on the CMS website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>.

In order to compute Factor 2, the first metric that is needed is the proportion of the total U.S. population that was uninsured in 2013. In developing the estimates for the NHEA, OACT's methodology included using the number of uninsured individuals for 1987 through 2009 based on the enhanced Current Population Survey (CPS) from the State Health Access Data Assistance Center (SHADAC). The CPS, sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics (BLS), is the primary source of labor force statistics for the population of the United States. (We refer readers

to the website at: <http://www.census.gov/programs-surveys/cps.html>.) The enhanced CPS, available from SHADAC (available at <http://datacenter.shadac.org>) accounts for changes in the CPS methodology over time. OACT further adjusts the enhanced CPS for an estimated undercount of Medicaid enrollees (a population that is often not fully captured in surveys that include Medicaid enrollees due to a perceived stigma associated with being enrolled in the Medicaid program or confusion about the source of their health insurance).

To estimate the number of uninsured individuals for 2010 through 2014, the OACT extrapolates from the 2009 CPS data using data from the National Health Interview Survey (NHIS). For both 2015 and 2016, OACT's estimates of the rate of uninsurance are derived by applying the NHIS data on the proportion of uninsured individuals to the total U.S. population as described above. The NHIS is one of the major data collection programs of the National Center for Health Statistics (NCHS), which is part of the Centers for Disease Control and Prevention (CDC). The U.S. Census Bureau is the data collection agent for the NHIS. The NHIS results have been instrumental over the years in providing data to track health status, health care access, and progress toward achieving national health objectives. For further information regarding the NHIS, we refer readers to the CDC website at: <https://www.cdc.gov/nchs/nhis/index.htm>.

The next metrics needed to compute Factor 2 are projections of the rate of uninsurance in both calendar years 2018 and 2019. On an annual basis, OACT projects enrollment and spending trends for the coming 10-year period. Those projections (currently for years 2017 through 2026) use the latest NHEA historical data, which

presently run through 2016. The NHEA projection methodology accounts for expected changes in enrollment across all of the categories of insurance coverage previously listed. The sources for projected growth rates in enrollment for Medicare, Medicaid, and CHIP include the latest Medicare Trustees Report, the Medicaid Actuarial Report, or other updated estimates as produced by OACT. Projected rates of growth in enrollment for private health insurance and the uninsured are based largely on OACT's econometric models, which rely on the set of macroeconomic assumptions underlying the latest Medicare Trustees Report. Greater detail can be found in OACT's report titled "Projections of National Health Expenditure: Methodology and Model Specification," which is available on the CMS website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/ProjectionsMethodology.pdf>.

As discussed in the FY 2018 IPPS/LTCH PPS final rule, the use of data from the NHEA to estimate the rate of uninsurance is consistent with the statute and meets the criteria we have identified for determining the appropriate data source. Section 1886(r)(2)(B)(ii) of the Act instructs the Secretary to estimate the rate of uninsurance for purposes of Factor 2 based on data from the Census Bureau or other sources the Secretary determines appropriate. The NHEA utilizes data from the Census Bureau; the estimates are available in time for the IPPS rulemaking cycle; the estimates are produced by OACT on an annual basis and are expected to continue to be produced for the foreseeable future; and projections are available for calendar year time periods that span the upcoming fiscal year. Timeliness and continuity are important considerations because of our need to be

able to update this estimate annually. Accuracy is also a very important consideration and, all things being equal, we would choose the most accurate data source that sufficiently meets our other criteria.

Using these data sources and the methodologies described above, the OACT estimates that the uninsured rate for the historical, baseline year of 2013 was 14 percent and for CYs 2018 and 2019 is 9.1 percent and 9.6 percent, respectively.<sup>229</sup> As required by section 1886(r)(2)(B)(ii) of the Act, the Chief Actuary of CMS has certified these estimates.

As with the CBO estimates on which we based Factor 2 in prior fiscal years, the NHEA estimates are for a calendar year. In the rulemaking for FY 2014, many commenters noted that the uncompensated care payments are made for the fiscal year and not on a calendar year basis and requested that CMS normalize the CBO estimate to reflect a fiscal year basis. Specifically, commenters requested that CMS calculate a weighted average of the CBO estimate for October through December 2013 and the CBO estimate for January through September 2014 when determining Factor 2 for FY 2014. We agreed with the commenters that normalizing the estimate to cover FY 2014 rather than CY 2014 would more accurately reflect the rate of uninsurance that hospitals would experience during the FY 2014 payment year. Accordingly, we estimated the rate of uninsurance for FY 2014 by calculating a weighted average of the CBO estimates for

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<sup>229</sup> Certification of Rates of Uninsured. March 22, 2018. Available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Downloads/FY2019-CMS-1694-P-OACT.pdf>.

CY 2013 and CY 2014 (78 FR 50633). We have continued this weighted average approach in each fiscal year since FY 2014.

We continue to believe that, in order to estimate the rate of uninsurance during a fiscal year more accurately, Factor 2 should reflect the estimated rate of uninsurance that hospitals will experience during the fiscal year, rather than the rate of uninsurance during only one of the calendar years that the fiscal year spans. Accordingly, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20393), we proposed to continue to apply the weighted average approach used in past fiscal years in order to estimate the rate of uninsurance for FY 2019. The OACT has certified this estimate of the fiscal year rate of uninsurance to be reasonable and appropriate for purposes of section 1886(r)(2)(B)(ii) of the Act.

The calculation of the proposed Factor 2 for FY 2019 using a weighted average of the OACT's projections for CY 2018 and CY 2019 was as follows:

- Percent of individuals without insurance for CY 2013: 14 percent.
- Percent of individuals without insurance for CY 2018: 9.1 percent.
- Percent of individuals without insurance for CY 2019: 9.6 percent.
- Percent of individuals without insurance for FY 2019 (0.25 times 0.091) +

(0.75 times 0.096): 9.48 percent

$$1 - |((0.0948 - 0.14) / 0.14)| = 1 - 0.3229 = 0.6771 \text{ (67.71 percent)}$$

$$0.6771 \text{ (67.71 percent)} - .002 \text{ (0.2 percentage points for FY 2019 under section}$$

$$1886(r)(2)(B)(ii) \text{ of the Act)} = 0.6751 \text{ or } 67.51 \text{ percent}$$

$$0.6751 = \text{Factor 2}$$

Therefore, we proposed that Factor 2 for FY 2019 would be 67.51 percent.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20393), we stated that the proposed FY 2019 uncompensated care amount was:  $\$12,221,027,954.62 \times 0.6751 = \$8,250,415,972.16$ .

We invited public comments on our proposed methodology for calculation of Factor 2 for FY 2019.

Comment: A number of commenters expressed appreciation for CMS' recognition that the aggregate amount available to be distributed to hospitals for uncompensated care costs will increase by approximately \$1.5 billion based on the most recently available projections of Medicare DSH payments for FY 2019 by CMS' Office of the Actuary. Other commenters stated the increase in the estimated amount available to make uncompensated care payments in FY 2019 was not enough to address the underpayments to hospitals that occurred as a result of using CBO data since FY 2014 to estimate the change in the rate of uninsurance. Several commenters supported CMS' continued use of the uninsured estimates produced by the OACT as part of the development of the National Health Expenditure Accounts in estimating the percent change in the rate of uninsured for FY 2019. Some of these commenters stated that, in their view, the estimates produced by the OACT are more complete and more accurately capture the change in the rate at which uninsured individuals have obtained health insurance. A few commenters noted that the data source added greater transparency to the process as the NHEA estimates are publicly available, while other commenters urged

CMS to ensure that all data are provided with complete transparency with respect to the type of data and data collection methods that are used.

Response: We appreciate the support for our proposal to continue using the uninsured estimates produced by OACT in the computation of Factor 2 for FY 2019. Section 1886(r)(2)(B)(ii) of the Act permits us to use a data source other than CBO estimates to determine the percent change in the rate of uninsurance beginning in FY 2018. We believe that the NHEA data, on balance, best meet all of our considerations to ensure that the data source meets the statutory requirement that the estimate be based on data from the Census Bureau or other sources the Secretary determines appropriate and will provide reasonable estimates for the rate of uninsurance that are available in conjunction with the IPPS rulemaking cycle.

In response to commenters who stated the increase in the estimated amount available to make uncompensated care payments in FY 2019 was not enough to address the underpayments to hospitals that occurred as a result of using CBO data in the past to estimate the change in the rate of uninsurance, we do not agree that addressing any difference between the prospectively determined estimates using the CBO data and later retrospective estimates would be appropriate for reasons we have articulated in past rulemaking and earlier in this section. We continue to believe that applying our best estimates prospectively is most conducive to administrative efficiency, finality, and predictability in payments (78 FR 50628; 79 FR 50010; 80 FR 49518; 81 FR 56949; and 82 FR 38195). We believe that, in affording the Secretary the discretion to estimate the three factors used to determine uncompensated care payments and by including a

prohibition against administrative and judicial review of those estimates in section 1886(r)(3) of the Act, Congress recognized the importance of finality and predictability under a prospective payment system. As a result, we do not agree with the commenters' suggestion that we should establish a process for reconciling our estimate of Factor 2 for any given year using later estimates.

After consideration of the public comments we received, we are finalizing the calculation of Factor 2 for FY 2019 as proposed. The estimates of the percent of uninsured individuals have been certified by the Chief Actuary of CMS, as discussed in the proposed rule. The calculation of the final Factor 2 for FY 2019 using a weighted average of OACT's projections for CY 2018 and CY 2019 is as follows:

- Percent of individuals without insurance for CY 2013: 14 percent.
- Percent of individuals without insurance for CY 2018: 9.1 percent.
- Percent of individuals without insurance for CY 2019: 9.6 percent.
- Percent of individuals without insurance for FY 2019 (0.25 times 0.091) +

(0.75 times 0.096): 9.48 percent

$$1 - |((0.0948 - 0.14) / 0.14)| = 1 - 0.3229 = 0.6771 \text{ (67.71 percent)}$$

$$0.6771 \text{ (67.71 percent)} - .002 \text{ (0.2 percentage points for FY 2019 under section}$$

1886(r)(2)(B)(ii) of the Act) = 0.6751 or 67.51 percent

$$0.6751 = \text{Factor 2}$$

Therefore, the final Factor 2 for FY 2019 is 67.51 percent.

The final FY 2019 uncompensated care amount is: \$12,254,291,878.57 x

$$0.6751 = \$8,272,872,447.22.$$

<b>Final FY 2019 Uncompensated Care Amount</b>	\$8,272,872,447.22
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c. Calculation of Factor 3 for FY 2019

(1) Background

Section 1886(r)(2)(C) of the Act defines Factor 3 in the calculation of the uncompensated care payment. As we have discussed earlier, section 1886(r)(2)(C) of the Act states that Factor 3 is equal to the percent, for each subsection (d) hospital, that represents the quotient of: (1) the amount of uncompensated care for such hospital for a period selected by the Secretary (as estimated by the Secretary, based on appropriate data (including, in the case where the Secretary determines alternative data are available that are a better proxy for the costs of subsection (d) hospitals for treating the uninsured, the use of such alternative data)); and (2) the aggregate amount of uncompensated care for all subsection (d) hospitals that receive a payment under section 1886(r) of the Act for such period (as so estimated, based on such data).

Therefore, Factor 3 is a hospital-specific value that expresses the proportion of the estimated uncompensated care amount for each subsection (d) hospital and each subsection (d) Puerto Rico hospital with the potential to receive Medicare DSH payments relative to the estimated uncompensated care amount for all hospitals estimated to receive Medicare DSH payments in the fiscal year for which the uncompensated care payment is to be made. Factor 3 is applied to the product of Factor 1 and Factor 2 to determine the amount of the uncompensated care payment that each eligible hospital will receive for FY 2014 and subsequent fiscal years. In order to implement the statutory requirements

for this factor of the uncompensated care payment formula, it was necessary to determine: (1) the definition of uncompensated care or, in other words, the specific items that are to be included in the numerator (that is, the estimated uncompensated care amount for an individual hospital) and the denominator (that is, the estimated uncompensated care amount for all hospitals estimated to receive Medicare DSH payments in the applicable fiscal year); (2) the data source(s) for the estimated uncompensated care amount; and (3) the timing and manner of computing the quotient for each hospital estimated to receive Medicare DSH payments. The statute instructs the Secretary to estimate the amounts of uncompensated care for a period based on appropriate data. In addition, we note that the statute permits the Secretary to use alternative data in the case where the Secretary determines that such alternative data are available that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured.

In the course of considering how to determine Factor 3 during the rulemaking process for FY 2014, the first year this provision was in effect, we considered defining the amount of uncompensated care for a hospital as the uncompensated care costs of that hospital and determined that Worksheet S-10 of the Medicare cost report potentially provides the most complete data regarding uncompensated care costs for Medicare hospitals. However, because of concerns regarding variations in the data reported on Worksheet S-10 and the completeness of these data, we did not use Worksheet S-10 data to determine Factor 3 for FY 2014, or for FYs 2015, 2016, or 2017. Instead, we believed that the utilization of insured low-income patients, as measured by patient days, would be

a better proxy for the costs of hospitals in treating the uninsured and therefore appropriate to use in calculating Factor 3 for these years. Of particular importance in our decision making was the relative newness of Worksheet S-10, which went into effect on May 1, 2010. At the time of the rulemaking for FY 2014, the most recent available cost reports would have been from FYs 2010 and 2011, which were submitted on or after May 1, 2010, when the new Worksheet S-10 went into effect. We believed that concerns about the standardization and completeness of the Worksheet S-10 data could be more acute for data collected in the first year of the Worksheet's use (78 FR 50635). In addition, we believed that it would be most appropriate to use data elements that have been historically publicly available, subject to audit, and used for payment purposes (or that the public understands will be used for payment purposes) to determine the amount of uncompensated care for purposes of Factor 3 (78 FR 50635). At the time we issued the FY 2014 IPPS/LTCH PPS final rule, we did not believe that the available data regarding uncompensated care from Worksheet S-10 met these criteria and, therefore, we believed they were not reliable enough to use for determining FY 2014 uncompensated care payments. For FYs 2015, 2016, and 2017, the cost reports used for calculating uncompensated care payments (that is, FYs 2011, 2012, and 2013) were also submitted prior to the time that hospitals were on notice that Worksheet S-10 could be the data source for calculating uncompensated care payments. Therefore, we believed it was also appropriate to use proxy data to calculate Factor 3 for these years. We indicated our belief that Worksheet S-10 could ultimately serve as an appropriate source of more direct data regarding uncompensated care costs for purposes of determining Factor 3 once

hospitals were submitting more accurate and consistent data through this reporting mechanism.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38202), we stated that we can no longer conclude that alternative data to the Worksheet S–10 are available for FY 2014 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. Hospitals were on notice as of FY 2014 that Worksheet S–10 could eventually become the data source for CMS to calculate uncompensated care payments. Furthermore, hospitals' cost reports from FY 2014 had been publicly available for some time, and CMS had analyses of Worksheet S–10, conducted both internally and by stakeholders, demonstrating that Worksheet S–10 accuracy had improved over time. Analyses performed by MedPAC had already shown that the correlation between audited uncompensated care data from 2009 and the data from the FY 2011 Worksheet S–10 was over 0.80, as compared to a correlation of approximately 0.50 between the audited uncompensated care data and 2011 Medicare SSI and Medicaid days. Based on this analysis, MedPAC concluded that use of Worksheet S–10 data was already better than using Medicare SSI and Medicaid days as a proxy for uncompensated care costs, and that the data on Worksheet S–10 would improve over time as the data are actually used to make payments (81 FR 25090). In addition, a 2007 MedPAC analysis of data from the Government Accountability Office (GAO) and the American Hospital Association (AHA) had suggested that Medicaid days and low-income Medicare days are not an accurate proxy for uncompensated care costs (80 FR 49525).

Subsequent analyses from Dobson/DaVanzo, originally commissioned by CMS for the FY 2014 rulemaking and updated in later years, compared Worksheet S–10 and IRS Form 990 data and assessed the correlation in Factor 3s derived from each of the data sources. The most recent update of this analysis, which used IRS Form 990 data for tax years 2011, 2012, and 2013 (the latest available years) as a benchmark, found that the amounts for Factor 3 derived using the IRS Form 990 and Worksheet S–10 data continue to be highly correlated and that this correlation continues to increase over time, from 0.80 in 2011 to 0.85 in 2013.

This empirical evidence led us to believe that we had reached a tipping point in FY 2018 with respect to the use of the Worksheet S–10 data. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38201 through 38203) for a complete discussion of these analyses.

We found further evidence for this tipping point when we examined changes to the FY 2014 Worksheet S–10 data submitted by hospitals following the publication of the FY 2017 IPPS/LTCH PPS final rule. In the FY 2017 IPPS/LTCH PPS final rule, as part of our ongoing quality control and data improvement measures for the Worksheet S–10, we referred readers to Change Request 9648, Transmittal 1681, titled “The Supplemental Security Income (SSI)/Medicare Beneficiary Data for Fiscal Year 2014 for Inpatient Prospective Payment System (IPPS) Hospitals, Inpatient Rehabilitation Facilities (IRFs), and Long Term Care Hospitals (LTCHs),” issued on July 15, 2016 (available at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/Downloads/R1681OTN.pdf>). In this transmittal, as part

of the process for ensuring complete submission of Worksheet S-10 by all eligible DSH hospitals, we instructed MACs to accept amended Worksheets S-10 for FY 2014 cost reports submitted by hospitals (or initial submissions of Worksheet S-10 if none had been submitted previously) and to upload them to the Health Care Provider Cost Report Information System (HCRIS) in a timely manner. The transmittal stated that, for revisions to be considered, hospitals were required to submit their amended FY 2014 cost report containing the revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) to the MAC no later than September 30, 2016. For the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19949 through 19950), we examined hospitals' FY 2014 cost reports to see if the Worksheet S-10 data on those cost reports had changed as a result of the opportunity for hospitals to submit revised Worksheet S-10 data for FY 2014. Specifically, we compared hospitals' FY 2014 Worksheet S-10 data as they existed in the first quarter of CY 2016 with data from the fourth quarter of CY 2016. We found that the FY 2014 Worksheet S-10 data had changed over that time period for approximately one quarter of hospitals that receive uncompensated care payments. The fact that the Worksheet S-10 data changed for such a significant number of hospitals following a review of the cost report data they originally submitted and that the revised Worksheet S-10 information is available to be used in determining uncompensated care costs contributed to our belief that we could no longer conclude that alternative data are available that are a better proxy than the Worksheet S-10 data for the costs of subsection (d) hospitals for treating individuals who are uninsured.

We also recognized commenters' concerns that, in using Medicaid days as part of the proxy for uncompensated care, it would be possible for hospitals in States that choose to expand Medicaid to receive higher uncompensated care payments because they may have more Medicaid patient days than hospitals in a State that does not choose to expand Medicaid. Because the earliest Medicaid expansions under the Affordable Care Act began in 2014, the 2011, 2012, and 2013 Medicaid days used to calculate uncompensated care payments in FYs 2015, 2016, and 2017 are the latest available data on Medicaid utilization that do not reflect the effects of these Medicaid expansions. Accordingly, if we had used only low-income insured days to estimate uncompensated care in FY 2018, we would have needed to hold the time period of these data constant and use data on Medicaid days from 2011, 2012, and 2013 in order to avoid the risk of any redistributive effects arising from the decision to expand Medicaid in certain States. As a result, we would have been using older data that may provide a less accurate proxy for the level of uncompensated care being furnished by hospitals, contributing to our growing concerns regarding the continued use of low-income insured days as a proxy for uncompensated care costs in FY 2018.

In summary, as we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38203), when weighing the new information regarding the growing correlation between the Worksheet S-10 data and IRS 990 data that became available to us after the FY 2017 rulemaking in conjunction with the information regarding Worksheet S-10 data and the low-income days proxy that we analyzed as part of our consideration of this issue in prior rulemaking, we determined that we could no longer conclude that alternative data

to the Worksheet S-10 are available for FY 2014 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. We also stated that we believe that continued use of Worksheet S-10 will improve the accuracy and consistency of the reported data, especially in light of CMS' concerted efforts to allow hospitals to review and resubmit their Worksheet S-10 data for past years and the use of select audit protocols to trim aberrant data and replace them with more reasonable amounts. We also committed to continue to work with stakeholders to address their concerns regarding the accuracy of the reporting of uncompensated care costs through provider education and refinement of the instructions to Worksheet S-10.

#### (2) Methodology Used to Calculate Factor 3 in Prior Fiscal Years

Section 1886(r)(2)(C) of the Act governs both the selection of the data to be used in calculating Factor 3, and also allows the Secretary the discretion to determine the time periods from which we will derive the data to estimate the numerator and the denominator of the Factor 3 quotient. Specifically, section 1886(r)(2)(C)(i) of the Act defines the numerator of the quotient as the amount of uncompensated care for such hospital for a period selected by the Secretary. Section 1886(r)(2)(C)(ii) of the Act defines the denominator as the aggregate amount of uncompensated care for all subsection (d) hospitals that receive a payment under section 1886(r) of the Act for such period. In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50638), we adopted a process of making interim payments with final cost report settlement for both the empirically justified Medicare DSH payments and the uncompensated care payments required by section 3133 of the Affordable Care Act. Consistent with that process, we also

determined the time period from which to calculate the numerator and denominator of the Factor 3 quotient in a way that would be consistent with making interim and final payments. Specifically, we must have Factor 3 values available for hospitals that we estimate will qualify for Medicare DSH payments and for those hospitals that we do not estimate will qualify for Medicare DSH payments but that may ultimately qualify for Medicare DSH payments at the time of cost report settlement.

In the FY 2017 IPPS/LTCH PPS final rule, in order to mitigate undue fluctuations in the amount of uncompensated care payments to hospitals from year to year and smooth over anomalies between cost reporting periods, we finalized a policy of calculating a hospital's share of uncompensated care based on an average of data derived from three cost reporting periods instead of one cost reporting period. As explained in the preamble to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56957 through 56959), instead of determining Factor 3 using data from a single cost reporting period as we did in FY 2014, FY 2015, and FY 2016, we used data from three cost reporting periods (Medicaid data for FYs 2011, 2012, and 2013 and SSI days from the three most recent available years of SSI utilization data (FYs 2012, 2013, and 2014)) to compute Factor 3 for FY 2017. Furthermore, instead of determining a single Factor 3 as we had done since the first year of the uncompensated care payment in FY 2014, we calculated an individual Factor 3 for each of the three cost reporting periods, which we then averaged by the number of cost reporting years with data to compute the final Factor 3 for a hospital. Under this policy, if a hospital had merged, we would combine data from both hospitals for the cost reporting periods in which the merger was not reflected in the surviving hospital's cost

report data to compute Factor 3 for the surviving hospital. Moreover, to further reduce undue fluctuations in a hospital's uncompensated care payments, if a hospital filed multiple cost reports beginning in the same fiscal year, we combined data from the multiple cost reports so that a hospital could have a Factor 3 calculated using more than one cost report within a cost reporting period. We codified these changes for FY 2017 by amending the regulations at § 412.106(g)(1)(iii)(C).

For FY 2018, consistent with the methodology used to calculate Factor 3 for FY 2017, we advanced the time period of the data used in the calculation of Factor 3 forward by one year and used data from FY 2012, FY 2013, and FY 2014 cost reports. We believed it would not be appropriate to use Worksheet S-10 data for periods prior to FY 2014, as hospitals did not have notice that the Worksheet S-10 data from these years might be used for purposes of computing uncompensated care payments and, as a result, may not have fully appreciated the importance of reporting their uncompensated care costs as completely and accurately as possible. Rather, for cost reporting periods prior to FY 2014, we believed it would be appropriate to continue to use low-income insured days. Accordingly, for the time period consisting of three cost reporting years, including FY 2014, FY 2013, and FY 2012, we used Worksheet S-10 data for the FY 2014 cost reporting period and the low-income insured days proxy data for the two earlier cost reporting periods. In order to perform this calculation, we drew three sets of data (2 years of Medicaid utilization data and 1 year of Worksheet S-10 data) from the most recent available HCRIS extract. Accordingly, for FY 2018, in addition to the Worksheet S-10 data for FY 2014, we used Medicaid days from FY 2012 and FY 2013 cost reports and

FY 2014 and FY 2015 SSI ratios. We also continued to use FY 2012 cost report data submitted to CMS by IHS and Tribal hospitals to determine FY 2012 Medicaid days for those hospitals. (Cost report data from IHS and Tribal hospitals are included in HCRIS beginning in FY 2013 and are no longer submitted separately.) We continued the policies that were finalized in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50020) to address several specific issues concerning the process and data to be employed in determining Factor 3 in the case of hospital mergers as well as the policies finalized in the FY 2017 IPPS/LTCH PPS final rule concerning multiple cost reports beginning in the same fiscal year (81 FR 56957).

To limit the effect of aberrant reporting of Worksheet S-10 data, we identified those hospitals that had high levels of reported uncompensated care relative to the total operating costs reported on the cost report. Specifically, for those hospitals where the ratio of uncompensated care costs relative to total operating costs for the hospital's 2014 cost report exceeded 50 percent, we determined the ratio of uncompensated care costs relative to total operating costs from the hospital's 2015 cost report and applied that ratio to the hospital's total operating costs from the 2014 cost report to determine an adjusted amount of uncompensated care costs for FY 2014. We then substituted this amount for the FY 2014 Worksheet S-10 data when determining Factor 3 for FY 2018. We believed that this approach, which affected the data for three hospitals in FY 2018, balanced our desire to exclude potentially aberrant data from a small number of hospitals in the determination of Factor 3 with our concern regarding inappropriately reducing FY 2018 uncompensated care payments to a hospital that may have a legitimately high ratio. We

stated our intent to consider in future rulemaking whether continued use of this adjustment or an alternative adjustment is necessary for subsequent years.

Due to concerns that the uncompensated care data reported by Puerto Rico hospitals and Indian Health Service and Tribal hospitals need to be examined further, we concluded that the Worksheet S-10 data for these hospitals should not be used to determine Factor 3 for FY 2018 (82 FR 38209). We also determined that Worksheet S-10 data should not be used to determine Factor 3 for all-inclusive rate providers, whose CCRs were deemed to be potentially erroneous and in need of further examination (82 FR 38212). For the reasons described earlier related to the impact of the Medicaid expansion beginning in FY 2014, we did not believe it was appropriate to calculate a Factor 3 for these hospitals using FY 2014 low-income insured days. Because we did not believe it was appropriate to use the FY 2014 uncompensated care data for these hospitals and we also did not believe it was appropriate to use the FY 2014 low-income insured days, we concluded that the best proxy for the costs of Puerto Rico, Indian Health Service and Tribal hospitals, and all-inclusive rate providers for treating the uninsured was the low-income insured days data for FY 2012 and FY 2013. Accordingly, in order to determine the Factor 3 for FY 2018 for these hospitals, we calculated an average of three individual Factor 3s using the Factor 3 calculated using FY 2013 cost report data twice and the Factor 3 calculated using FY 2012 cost report data once. We believed it was appropriate to double-weight the Factor 3 calculated using FY 2013 data as it reflects the most recent available information regarding the hospital's low-income insured days before any expansion of Medicaid. We stated that we would

reexamine the use of the Worksheet S–10 data for Puerto Rico, Indian Health Service and Tribal hospitals, and all-inclusive rate providers as part of the FY 2019 rulemaking. In addition, for Puerto Rico hospitals, we continued to use a proxy for SSI days consisting of 14 percent of a hospital’s Medicaid days, as was first applied in FY 2017 (82 FR 38209).

Therefore, for FY 2018, we computed a Factor 3 for each hospital by—

- Step 1: Calculating Factor 3 using the low-income insured days proxy based on FY 2012 cost report data and the FY 2014 SSI ratio;
- Step 2: Calculating Factor 3 using the insured low-income days proxy based on FY 2013 cost report data and the FY 2015 SSI ratio;
- Step 3: Calculating Factor 3 based on the FY 2014 Worksheet S–10 data (or using the Factor 3 calculated in Step 2 for Puerto Rico, IHS/Tribal hospitals, and all-inclusive rate providers); and
- Step 4: Averaging the Factor 3 values from Steps 1, 2, and 3; that is, adding the Factor 3 values from FY 2012, FY 2013, and FY 2014 for each hospital, and dividing that amount by the number of cost reporting periods with data to compute an average Factor 3.

We stated our belief that if we were to propose to continue this methodology for FY 2019 and FY 2020, this approach would have the effect of transitioning the incorporation of data from Worksheet S–10 into the calculation of Factor 3 because an additional year of Worksheet S–10 data would be incorporated into the calculation of

Factor 3 in FY 2019, and the use of low-income insured days would be phased out by FY 2020.

(3) Methodology for Calculating Factor 3 for FY 2019

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20396), since the publication of the FY 2018 IPPS/LTCH PPS final rule, we have continued to monitor the reporting of Worksheet S-10 data in anticipation of using Worksheet S-10 data from hospitals' FY 2014 and FY 2015 cost reports in the calculation of Factor 3. We acknowledge the concerns that have been raised regarding the instructions for Worksheet S-10. In particular, commenters have expressed concerns that the lack of clear and concise line level instructions prevents accurate and consistent data from being reported on Worksheet S-10. We note that, in November 2016, CMS issued Transmittal 10, which clarified and revised the instructions for the Worksheet S-10, including the instructions regarding the reporting of charity care charges. Transmittal 10 is available for download on the CMS website at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/Downloads/R10P240.pdf>. In Transmittal 10, we clarified that hospitals may include discounts given to uninsured patients who meet the hospital's charity care criteria in effect for that cost reporting period. This clarification applied to cost reporting periods beginning prior to October 1, 2016, as well as cost reporting periods beginning on or after October 1, 2016. As a result, nothing prohibits a hospital from considering a patient's insurance status as a criterion in its charity care policy. A hospital determines its own financial criteria as part of its charity care policy. The instructions for the Worksheet S-10 set forth that hospitals may include discounts

given to uninsured patients, including patients with coverage from an entity that does not have a contractual relationship with the provider, who meet the hospital's charity care criteria in effect for that cost reporting period. In addition, we revised the instructions for the Worksheet S-10 for cost reporting periods beginning on or after October 1, 2016, to provide that charity care charges must be determined in accordance with the hospital's charity care criteria/policy and written off in the cost reporting period, regardless of the date of service.

During the FY 2018 rulemaking, commenters pointed out that, in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56963), CMS agreed to institute certain additional quality control and data improvement measures prior to moving forward with incorporating Worksheet S-10 data into the calculation of Factor 3. However, the commenters indicated that, aside from a brief window in 2016 for hospitals to submit corrected data on their FY 2014 Worksheet S-10 by September 30, 2016, and the issuance of revised instructions (Transmittal 10) in November 2016 that are applicable to cost reports beginning on or after October 1, 2016, CMS had not implemented any additional quality control and data improvement measures. We stated in the FY 2018 IPPS/LTCH PPS final rule that we would continue to work with stakeholders to address their concerns regarding the reporting of uncompensated care through provider education and refinement of the instructions to the Worksheet S-10 (82 FR 38206).

On September 29, 2017, we issued Transmittal 11, which clarified the definitions and instructions for uncompensated care, non-Medicare bad debt, non-reimbursed Medicare bad debt, and charity care, as well as modified the calculations relative to

uncompensated care costs and added edits to ensure the integrity of the data reported on Worksheet S-10. Transmittal 11 is available for download on the CMS website at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/2017Downloads/R11p240.pdf>. We further clarified that full or partial discounts given to uninsured patients who meet the hospital's charity care policy or financial assistance policy/uninsured discount policy (hereinafter referred to as Financial Assistance Policy or FAP) may be included on Line 20, Column 1 of Worksheet S-10. These clarifications apply to cost reporting periods beginning on or after October 1, 2013. We also modified the application of the CCR. We specified that the CCR will not be applied to the deductible and coinsurance amounts for insured patients approved for charity care and non-reimbursed Medicare bad debt. The CCR will be applied to the charges for uninsured patients approved for charity care or an uninsured discount, non-Medicare bad debt, and charges for noncovered days exceeding a length of stay limit imposed on patients covered by Medicaid or other indigent care programs.

We also provided another opportunity for hospitals to submit revisions to their Worksheet S-10 data for FY 2014 and FY 2015 cost reports. We refer readers to Change Request 10378, Transmittal 1981, titled "Fiscal Year (FY) 2014 and 2015 Worksheet S 10 Revisions: Further Extension for All Inpatient Prospective Payment System (IPPS) Hospitals," issued on December 1, 2017 (available at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/2017Downloads/R1981OTN.pdf>). In this transmittal, we instructed MACs to accept amended Worksheets S-10 for FY 2014 and FY 2015 cost reports submitted by hospitals (or initial submissions of Worksheet S-10 if

none had been submitted previously) and to upload them to the Health Care Provider Cost Report Information System (HCRIS) in a timely manner. The transmittal states that hospitals must submit their amended FY 2014 and FY 2015 cost reports containing the revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) to the MAC no later than January 2, 2018. We note that this transmittal supersedes the previous deadline in Change Request 10026, which was issued on June 30, 2017, with respect to the dates by which hospitals must submit their revised or newly submitted Worksheet S-10 in order to be considered for purposes of this rulemaking, as well as the dates by which MACs must accept these data and upload a revised cost report to HCRIS. Under the deadlines established in Change Request 10378, in order for revisions to be guaranteed consideration for the FY 2019 proposed rule, hospitals had to submit their amended FY 2014 and FY 2015 cost reports containing the revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) to the MAC no later than December 1, 2017. We also indicated that, all revised data received by December 1, 2017, would be considered for purposes of the FY 2019 IPPS/LTCH PPS proposed rule, and all revised data received by the January 2, 2018 deadline would be available to be considered for purposes of the FY 2019 IPPS/LTCH PPS final rule.

However, for the FY 2019 IPPS/LTCH PPS proposed rule, we were able to include data updated in HCRIS through February 15, 2018. Specifically, in light of the impact of the hurricanes in 2017 (Harvey, Irma, Maria, and Nate) and the extension of the deadline for resubmitting Worksheets S-10 for FY 2014 and FY 2015 through January 2,

2018, we believed it was appropriate to use data updated through February 15, 2018, rather than the December 2017 HCRIS update, which we typically use for the annual proposed rule. We believe that providing the additional time to allow cost reports that may have been delayed due to these unique circumstances to be included in our calculations for purposes of the FY 2019 proposed rule, enabled us to use more accurate uncompensated care cost data in calculating the proposed Factor 3 values.

We examined hospitals' FY 2014 and FY 2015 cost reports to determine if the Worksheet S-10 data on those cost reports had changed as a result of the additional opportunity for hospitals to submit revised Worksheet S-10 data for FY 2014 and FY 2015. Specifically, we compared hospitals' FY 2014 and FY 2015 Worksheet S-10 data as reported in the fourth quarter of CY 2016 update of HCRIS to the February 15, 2018 update of HCRIS. We examined hospitals' cost report data to determine if the Worksheet S 10 data had changed for any of the following lines: total bad debt from Line 26, charity care for uninsured patients from Line 20, Column 1, or charity care for insured patients from Line 20, Column 2. Based on our review, we found that Worksheet S-10 data for both FY 2014 and FY 2015 had changed over that time period for approximately one-half of the hospitals that were eligible to receive Medicare DSH payments in FY 2018. The fact that the Worksheet S-10 data changed for such a significant number of hospitals following the opportunity to review their previously submitted cost report data and submit a revised Worksheet S-10, and that this revised Worksheet S-10 information is available to be used in determining uncompensated care costs, contributes to our determination that it is appropriate to continue to incorporate

Worksheet S-10 data into the calculation of Factor 3 values for hospitals that are eligible to receive Medicare DSH payments.

As we stated in the FY 2019 IPPS/LTCH PPS proposed rule, with the additional steps we have taken to ensure the accuracy and consistency of the data reported on Worksheet S-10 since the publication of the FY 2018 IPPS/LTCH PPS final rule, we continue to believe that we can no longer conclude that alternative data to the Worksheet S-10 are currently available for FY 2014 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. Similarly, the actions that we have taken to improve the accuracy and consistency of the Worksheet S-10 data, including the opportunity for hospitals to resubmit Worksheet S-10 data for FY 2015, lead us to conclude that there are no alternative data to the Worksheet S-10 data currently available for FY 2015 that are a better proxy for the costs of subsection (d) hospitals for treating uninsured individuals. As such, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20400), we proposed to advance the time period of the data used in the calculation of Factor 3 forward by 1 year and to use data from FY 2013, FY 2014, and FY 2015 cost reports to determine Factor 3 for FY 2019. For the reasons we described earlier, we stated that we continue to believe it is inappropriate to use Worksheet S-10 data for periods prior to FY 2014. Rather, for cost reporting periods prior to FY 2014, we believe it is appropriate to continue to use low-income insured days. Accordingly, with a time period that includes 3 cost reporting years consisting of FY 2015, FY 2014, and FY 2013, we proposed to use Worksheet S-10 data for the FY 2014 and FY 2015 cost reporting periods and the low-income insured days proxy data for the earliest cost

reporting period. As in previous years, in order to perform this calculation, we drew three sets of data (1 year of Medicaid utilization data and 2 years of Worksheet S–10 data) from the most recent available HCRIS extract, which, for purposes of the FY 2019 proposed rule, was the HCRIS data updated through February 15, 2018. In the FY 2019 IPPS/LTCH PPS proposed rule, we stated that we expected to use the March 2018 update of HCRIS for the final rule. However, due to unique circumstances regarding the impact of the hurricanes in 2017 (Harvey, Irma, Maria, and Nate) and the extension of the deadline to resubmit Worksheet S-10 data through January 2, 2018, and the subsequent impact on the MAC review timeline, we indicated that we might consider using data updated through May 31, 2018, in the final rule, if necessary.

Accordingly, for FY 2019, in addition to the Worksheet S–10 data for FY 2014 and FY 2015, we proposed to use Medicaid days from FY 2013 cost reports and FY 2016 SSI ratios. We noted that cost report data from Indian Health Service and Tribal hospitals are included in HCRIS beginning in FY 2013 and no longer need to be incorporated from a separate data source. We also proposed to continue the policies that were finalized in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50020) to address several specific issues concerning the process and data to be employed in determining Factor 3 in the case of hospital mergers. In addition, we proposed to continue the policies that were finalized in the FY 2018 IPPS/LTCH PPS final rule to address technical considerations related to the calculation of Factor 3 and the incorporation of Worksheet S-10 data (82 FR 38213 through 38220). In that final rule, we adopted a policy, for purposes of calculating Factor 3, under which we annualize Medicaid days data and

uncompensated care cost data reported on the Worksheet S-10 if a hospital's cost report does not equal 12 months of data. As in FY 2018, for FY 2019, we did not propose to annualize SSI days because we do not obtain these data from hospital cost reports in HCRIS. Rather, we obtain these data from the latest available SSI ratios posted on the Medicare DSH homepage (<https://www.cms.gov/Medicare/Medicare-fee-for-service-payment/AcuteInpatientPPS/dsh.html>), which are aggregated at the hospital level and do not include the information needed to determine if the data should be annualized. To address the effects of averaging Factor 3s calculated for 3 separate fiscal years, we proposed to continue to apply a scaling factor to the Factor 3 values of all DSH eligible hospitals such that total uncompensated care payments are consistent with the estimated amount available to make uncompensated care payments for the applicable fiscal year. With respect to the incorporation of Worksheet S-10, we indicated that we believe that the definition of uncompensated care adopted in FY 2018 is still appropriate because it incorporates the most commonly used factors within uncompensated care as reported by stakeholders, including charity care costs and non-Medicare bad debt costs, and correlates to Line 30 of Worksheet S-10. Therefore, we again proposed that, for purposes of calculating Factor 3 and uncompensated care costs in FY 2019, "uncompensated care" would be defined as the amount on Line 30 of Worksheet S-10, which is the cost of charity care (Line 23) and the cost of non-Medicare bad debt and non-reimbursable Medicare bad debt (Line 29).

We noted that we were proposing to discontinue the policy finalized in the FY 2017 IPPS/LTCH PPS final rule concerning multiple cost reports beginning in the

same fiscal year (81 FR 56957). Under this policy, we would first combine the data across the multiple cost reports before determining the difference between the start date and the end date to determine if annualization is needed. The policy was developed in response to commenters' concerns regarding the unique circumstances of hospitals that filed cost reports that are shorter or longer than 12 months. As we explained in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56957 through 56959) and in the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19953), we believed that, for hospitals that file multiple cost reports beginning in the same year, combining the data from these cost reports had the benefit of supplementing the data of hospitals that filed cost reports that are less than 12 months, such that the basis of their uncompensated care payments and those of hospitals that filed full-year 12-month cost reports would be more equitable. As we stated in the FY 2019 IPPS/LTCH PPS proposed rule, we now believe that concerns about the equitability of the data used as the basis of hospital uncompensated care payments are more thoroughly addressed by the policy finalized in the FY 2018 IPPS/LTCH PPS final rule, under which CMS annualizes the Medicaid days and uncompensated care cost data of hospital cost reports that do not equal 12 months of data. Based on our experience, we stated that we believe that in many cases where a hospital files two cost reports beginning in the same fiscal year, combining the data across multiple cost reports before annualizing would yield a similar result to choosing the longer of the two cost reports and then annualizing the data if the cost report is shorter or longer than 12 months. Furthermore, even in cases where a hospital files more than one cost report beginning in the same fiscal year, it is not uncommon for one of those cost

reports to span exactly 12 months. In this case, if Factor 3 is determined using only the full 12-month cost report, annualization would be unnecessary as there would already be 12 months of data. Therefore, for FY 2019, we stated that we believed it was appropriate to propose to eliminate the additional step of combining data across multiple cost reports if a hospital filed more than one cost report beginning in the same fiscal year. Instead, for purposes of calculating Factor 3, we would use data from the cost report that is equivalent to 12 months or, if no such cost report exists, the cost report that is closest to 12 months and annualize the data. Furthermore, we acknowledged that, in rare cases, a hospital may have more than one cost report beginning in one fiscal year, where one report also spans the entirety of the following fiscal year, such that the hospital has no cost report beginning in that fiscal year. For instance, a hospital's cost reporting period may have started towards the end of FY 2012 but cover the duration of FY 2013. In these rare situations, we proposed to use data from the cost report that spans both fiscal years in the Factor 3 calculation for the latter fiscal year as the hospital would already have data from the preceding cost report that could be used to determine Factor 3 for the previous fiscal year.

We also proposed to continue to apply statistical trims to anomalous hospital CCRs using the methodology adopted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38217 through 38219), where we stated our belief that, just as we apply trims to hospitals' CCRs to eliminate anomalies when calculating outlier payments for extraordinarily high cost cases (§ 412.84(h)(3)(ii)), it is appropriate to apply statistical trims to the CCRs on Worksheet S-10, Line 1, that are considered anomalies.

Specifically, § 412.84(h)(3)(ii) states that the Medicare contractor may use a statewide CCR for hospitals whose operating or capital CCR is in excess of 3 standard deviations above the corresponding national geometric mean (that is, the CCR “ceiling”). This mean is recalculated annually by CMS and published in the proposed and final IPPS rules each year.

Similar to the process used in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38217 through 38218) for trimming CCRs, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20398), we proposed the following steps for FY 2019:

Step 1: Remove Maryland hospitals. In addition, we would remove All Inclusive Rate Providers because they have charge structures that differ from other IPPS hospitals. For providers that did not report a CCR on Worksheet S-10, Line 1, we would assign them the statewide average CCR in step 5 below.

Step 2: For each fiscal year (FY 2014 and FY 2015), calculate a CCR “ceiling” with the following data: for each IPPS hospital that was not removed in Step 1 (including non-DSH eligible hospitals), we would use cost report data to calculate a CCR by dividing the total costs on Worksheet C, Part I, Line 202, Column 3 by the charges reported on Worksheet C, Part I, Line 202, Column 8. (Combining data from multiple cost reports from the same FY is no longer necessary in this step, as the longer cost report would be selected). The ceiling would be calculated as 3 standard deviations above the national geometric mean CCR for the applicable fiscal year. This approach is consistent with the methodology for calculating the CCR ceiling used for high-cost outliers. Remove all hospitals that exceed the ceiling so that these aberrant CCRs do not skew the

calculation of the statewide average CCR. (For this final rule, this trim would remove 5 hospitals that have a CCR above the calculated ceiling of 1.031 for FY 2014 and 9 hospitals that have a CCR above the calculated ceiling of 0.93 for FY 2015.)

Step 3: Using the CCRs for the remaining hospitals in Step 2, determine the urban and rural statewide average CCRs for FY 2014 and for FY 2015 for hospitals within each State (including non-DSH eligible hospitals), weighted by the sum of total inpatient discharges and outpatient visits from Worksheet S-3, Part I, Line 14, Column 14.

Step 4: Assign the appropriate statewide average CCR (urban or rural) calculated in Step 3 to all hospitals with a CCR for the applicable fiscal year greater than 3 standard deviations above the corresponding national geometric mean for that fiscal year (that is, the CCR “ceiling”). For this final rule, the statewide average CCR would therefore be applied to 14 hospitals, of which 2 hospitals in FY 2014 have Worksheet S-10 data and 5 hospitals in FY 2015 have Worksheet S-10 data.

After applying the applicable trims to a hospital’s CCR as appropriate, we proposed that we would calculate a hospital’s uncompensated care costs for the applicable fiscal year as being equal to Line 30, which is the sum of Line 23, Column 3 and Line 29, as follows:

Hospital Uncompensated Care Costs = Line 30 (Line 23, Column 3 + Line 29),  
which is equal to—

$$[(\text{Line 1 CCR (as adjusted, if applicable)}) \times \text{Uninsured patient charity care Line 20, Column 1}] - (\text{Payments received from uninsured patient charity care Line 22,})$$

Column 1)] + [(Insured patient charity care Line 20, Column 2) - Insured patient charges from days beyond length of stay limit \* (1-(Line 1 CCR (as adjusted, if applicable))) - (Payments received from insured patient charity care Line 22, Column 2)] + [(Line 1 CCR (as adjusted, if applicable) × Non-Medicare bad debt Line 28) + (Medicare allowable bad debts Line 27.01 - Medicare reimbursable bad debt Line 27)].

Similar in concept to the policy that we adopted for FY 2018, for FY 2019, we stated in the proposed rule that we continue to believe that uncompensated care costs that represent an extremely high ratio of a hospital's total operating expenses (such as the ratio of 50 percent used in the FY 2018 IPPS/LTCH PPS final rule) may be potentially aberrant, and that using the ratio of uncompensated care costs to total operating costs to identify potentially aberrant data when determining Factor 3 amounts has merit. That is, we stated that we continue to believe that, in the rare situations where a hospital has a ratio of uncompensated care costs to total operating expenditures that is extremely high, the issue is most likely with the hospital's uncompensated care costs and not its total operating costs. We noted that we had instructed the MACs to review situations where a hospital has an extremely high ratio of uncompensated care costs to total operating costs with the hospital, but indicated that we did not intend to make the MACs' review protocols public. As stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56964), for program integrity reasons, CMS desk review and audit protocols are confidential and are for CMS and MAC use only. If the hospital cannot justify its reported uncompensated care amount, we stated that we believed it would be appropriate to utilize data from another fiscal year to address the potentially aberrant Worksheet S-10 data for FY 2014

or FY 2015. As we have previously indicated, we do not believe it would be appropriate to use Worksheet S 10 data from years prior to FY 2014 in the determination of Factor 3. Therefore, the most widely available Worksheet S–10 data available to us if a hospital has an extremely high ratio of uncompensated care costs to total operating expenses based on its FY 2014 or FY 2015 Worksheet S–10 data are the FY 2015 and FY 2016 Worksheet S–10 data. Accordingly, similar in concept to the approach we used in FY 2018, in cases where a hospital’s uncompensated care costs for FY 2014 are an extremely high ratio of its total operating costs and the hospital cannot justify the amount it reported, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20399), we proposed to determine the ratio of FY 2015 uncompensated care costs to FY 2015 total operating expenses from the hospital’s FY 2015 cost report and apply that ratio to the FY 2014 total operating expenses from the hospital’s FY 2014 cost report to determine an adjusted amount of uncompensated care costs for FY 2014. We proposed that we would then use this adjusted amount to determine Factor 3 for FY 2019. Similarly, if a hospital has uncompensated care costs for FY 2015 that are an extremely high ratio of its total operating costs for that year and the hospital cannot justify its reported amount, we proposed to follow the same methodology using data from the hospital’s FY 2016 cost report to determine an adjusted amount of uncompensated care costs for FY 2015. That is, we would determine the ratio of FY 2016 uncompensated care costs to FY 2016 total operating expenses from a hospital’s FY 2016 cost report and apply that ratio to the FY 2015 total operating expenses from the hospital’s FY 2015 cost report to determine an adjusted amount of uncompensated care costs for FY 2015. We proposed that we would

then use this adjusted amount when determining Factor 3 for FY 2019. We tentatively included the data for hospitals that had a high ratio of uncompensated care costs to total operating expenses when calculating Factor 3 for the proposed rule. However, we noted in the proposed rule that our calculation of Factor 3 for this final rule would be contingent on the results of the ongoing MAC reviews of these hospitals. In the event those reviews necessitate supplemental data edits, we stated that we would incorporate such edits in the final rule for the purpose of correcting aberrant data.

We also stated in the proposed rule that, for FY 2019, we believe that situations where there were extremely large dollar increases or decreases in a hospital's uncompensated care costs when it resubmitted its FY 2014 Worksheet S-10 or FY 2015 Worksheet S-10 data, or when the data it had previously submitted were reprocessed by the MAC, may reflect potentially aberrant data and warrant further review. For example, although we do not make our actual review protocols public, we indicated that we might conclude that it would be appropriate to review hospitals with increases or decreases in uncompensated care costs in the top 1 percent of such changes. We noted that we had instructed our MACs to review these situations with each hospital. If it is determined after this review that an increase or decrease in uncompensated care costs cannot be justified by the hospital, we proposed to follow the same approach that we proposed to use to address situations when a hospital's ratio of its uncompensated care costs to its operating expenses is extremely high and the hospital cannot justify its reported amount. Specifically, if after review, the increase or decrease in uncompensated care costs for FY 2014 or FY 2015 cannot be justified by the hospital, we proposed that we would

determine the ratio of the uncompensated care costs to total operating expenses from the hospital's cost report for the subsequent fiscal year and apply that ratio to the total operating expenses from the hospital's resubmitted cost report with the large increase or decrease in uncompensated care payments to determine an adjusted amount of uncompensated care costs for the applicable fiscal year. We indicated that we had tentatively included the data for hospitals where there was an extremely large increase or decrease in uncompensated care payments when calculating Factor 3 for the proposed rule. However, we noted in the proposed rule that our calculation of Factor 3 for the final rule was contingent on the results of the ongoing MAC reviews of these hospitals. In the event those reviews necessitate supplemental data edits, we stated that we would incorporate such edits in the final rule for the purpose of correcting aberrant data.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20400), for Indian Health Service and Tribal hospitals, subsection (d) Puerto Rico hospitals, and all-inclusive rate providers, we proposed to continue the policy we first adopted for FY 2018 of substituting data regarding FY 2013 low-income insured days for the Worksheet S-10 data when determining Factor 3. As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38209), the use of data from Worksheet S-10 to calculate the uncompensated care amount for Indian Health Service and Tribal hospitals may jeopardize these hospitals' uncompensated care payments due to their unique funding structure. With respect to Puerto Rico hospitals, we continue to agree with concerns raised by commenters that the uncompensated care data reported by these hospitals need to be further examined before the data are used to determine Factor 3 (82 FR 38209). Finally,

the CCRs for all-inclusive rate providers are potentially erroneous and still in need of further examination before they can be used in the determination of uncompensated care amounts for purposes of Factor 3 (82 FR 38212). For the reasons described earlier, related to the impact of the Medicaid expansion beginning in FY 2014, we stated in the proposed rule that we also continue to believe that it is inappropriate to calculate a Factor 3 using FY 2014 and FY 2015 low-income insured days. Because we do not believe it is appropriate to use the FY 2014 or FY 2015 uncompensated care data for these hospitals and we also do not believe it is appropriate to use the FY 2014 or FY 2015 low-income insured days, the best proxy for the costs of Indian Health Service and Tribal hospitals, subsection (d) Puerto Rico hospitals, and all-inclusive rate providers for treating the uninsured continues to be the low-income insured days data for FY 2013. Accordingly, for these hospitals, we proposed to determine Factor 3 only on the basis of low-income insured days for FY 2013. We stated that we believe this approach is appropriate as the FY 2013 data reflect the most recent available information regarding these hospitals' low-income insured days before any expansion of Medicaid. In the proposed rule, we did not make any proposals with respect to the calculation of Factor 3 for FY 2020 and indicated that we will reexamine the use of the Worksheet S-10 data for Indian Health Service and Tribal hospitals, subsection (d) Puerto Rico hospitals, and all-inclusive rate providers as part of the FY 2020 rulemaking. In addition, because we proposed to continue to use 1 year of insured low-income patient days as a proxy for uncompensated care and residents of Puerto Rico are not eligible for SSI benefits, we proposed to continue to use a proxy for SSI days for Puerto Rico hospitals consisting of 14 percent of

the hospital's Medicaid days, as finalized in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56953 through 56956).

Therefore, for FY 2019, we proposed to compute Factor 3 for each hospital by—

Step 1: Calculating Factor 3 using the low-income insured days proxy based on FY 2013 cost report data and the FY 2016 SSI ratio (or, for Puerto Rico hospitals, 14 percent of the hospital's FY 2013 Medicaid days);

Step 2: Calculating Factor 3 based on the FY 2014 Worksheet S-10 data;

Step 3: Calculating Factor 3 based on the FY 2015 Worksheet S-10 data; and

Step 4: Averaging the Factor 3 values from Steps 1, 2, and 3; that is, adding the Factor 3 values from FY 2013, FY 2014, and FY 2015 for each hospital, and dividing that amount by the number of cost reporting periods with data to compute an average Factor 3 (or for Puerto Rico hospitals, Indian Health Service and Tribal hospitals, and all-inclusive rate providers using the Factor 3 value from Step 1).

We also proposed to amend the regulations at § 412.106(g)(1)(iii)(C) by adding a new paragraph (5) to reflect this proposed methodology for computing Factor 3 for FY 2019.

In the proposed rule, we noted that if a hospital does not have both Medicaid days for FY 2013 and SSI days for FY 2016 available for use in the calculation of Factor 3 in Step 1, we consider the hospital not to have data available for the fiscal year, and will remove that fiscal year from the calculation and divide by the number of years with data. A hospital will be considered to have both Medicaid days and SSI days data available if it reports zero days for either component of the Factor 3 calculation in Step 1. However, if

a hospital is missing data due to not filing a cost report in one of the applicable fiscal years, we will divide by the remaining number of fiscal years.

Although we did not make any proposals with respect to the development of Factor 3 for FY 2020 and subsequent fiscal years, in the proposed rule, we noted that the above methodology would have the effect of fully transitioning the incorporation of data from Worksheet S-10 into the calculation of Factor 3 if used in FY 2020. Starting with 1 year of Worksheet S-10 data in FY 2018, an additional year of Worksheet S-10 data will be incorporated into the calculation of Factor 3 in FY 2019 under the policies included in this final rule, and the use of low-income insured days would be phased out by FY 2020 if the same methodology is proposed and finalized for that year. We also indicated that it is possible that when we examine the FY 2016 Worksheet S-10 data, we may determine that the use of multiple years of Worksheet S-10 data is no longer necessary in calculating Factor 3 for FY 2020. For example, given the efforts hospitals have already undertaken with respect to reporting their Worksheet S-10 data and the subsequent reviews by the MACs that had already been conducted prior to the development of this final rule, along with additional review work that may take place following the issuance of this final rule, we may consider using 1 year of Worksheet S-10 data as the basis for calculating Factor 3 for FY 2020.

For new hospitals that do not have data for any of the three cost reporting periods used in the Factor 3 calculation, we proposed to continue to apply the new hospital policy finalized in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50643). That is, the hospital would not receive either interim empirically justified Medicare DSH payments or interim

uncompensated care payments. However, if the hospital is later determined to be eligible to receive empirically justified Medicare DSH payments based on its FY 2019 cost report, the hospital would also receive an uncompensated care payment calculated using a Factor 3, where the numerator is the uncompensated care costs reported on Worksheet S-10 of the hospital's FY 2019 cost report, and the denominator is the sum of uncompensated care costs reported on Worksheet S-10 of all DSH eligible hospitals' FY 2015 cost reports. Due to the uncertainty regarding the completeness and accuracy of the FY 2019 uncompensated care cost data at the time this calculation would need to be performed, we stated that we believe it would be more appropriate to use the sum of the uncompensated care costs reported on Worksheet S-10 of all DSH eligible hospitals' cost reports from FY 2015, the most recent year of the 3-year time period used in the development of Factor 3, to determine the denominator of Factor 3 for new hospitals. We noted that, given the time period of the data used to calculate Factor 3, any hospitals with a CCN established after October 1, 2015 would be considered new and subject to this policy.

As we have done for every proposed and final rule beginning in FY 2014, we stated that, in conjunction with both the FY 2019 IPPS/LTCH PPS proposed rule and this final rule, we would publish on the CMS website a table listing Factor 3 for all hospitals that we estimate would receive empirically justified Medicare DSH payments in FY 2019 (that is, those hospitals that would receive interim uncompensated care payments during the fiscal year), and for the remaining subsection (d) hospitals and subsection (d) Puerto Rico hospitals that have the potential of receiving a Medicare DSH payment in the event

that they receive an empirically justified Medicare DSH payment for the fiscal year as determined at cost report settlement. We noted that, at the time of the development of the proposed rule, the FY 2016 SSI ratios were available. Accordingly, for modeling purposes, we computed the proposed Factor 3 for each hospital using the most recent available data regarding SSI days from the FY 2016 SSI ratios.

In conjunction with the proposed rule, we also published a supplemental data file containing a list of the mergers that we were aware of and the computed uncompensated care payment for each merged hospital. Hospitals had 60 days from the date of public display of the FY 2019 IPPS/LTCH PPS proposed rule to review the table and supplemental data file published on the CMS website in conjunction with the proposed rule and to notify CMS in writing of any inaccuracies. Comments could be submitted to the CMS inbox at [Section3133DSH@cms.hhs.gov](mailto:Section3133DSH@cms.hhs.gov). We stated that we would address these comments as appropriate in the table and the supplemental data file that we will publish on the CMS website in conjunction with the publication of this FY 2019 IPPS/LTCH PPS final rule. After the publication of this FY 2019 IPPS/LTCH PPS final rule, hospitals will have until August 31, 2018, to review and submit comments on the accuracy of the table and supplemental data file published in conjunction with this final rule. Comments may be submitted to the CMS inbox at [Section3133DSH@cms.hhs.gov](mailto:Section3133DSH@cms.hhs.gov) through August 31, 2018, and any changes to Factor 3 will be posted on the CMS website prior to October 1, 2018.

Comment: A number of commenters supported CMS' proposal to continue using data from Worksheet S-10 in the calculation of Factor 3 for FY 2019. These commenters

stated that using Worksheet S-10 data, in conjunction with select auditing of cost reports, will lead to better estimates of uncompensated care costs than the continued use of the current proxy of Medicaid and SSI days. Other commenters noted that the metrics from Worksheet S-10 appear to provide a better assessment of a hospital's uncompensated care costs than the current proxy data, which assess only low-income insured days and distribute the bulk of Medicare DSH payments based on the amount of inpatient care a hospital delivers to Medicaid patients and recipients of SSI payments. Thus, the commenters stated, using data from Worksheet S-10 will address the inequity across Medicaid expansion/nonexpansion States in distributing disproportionate share hospital dollars. One commenter stated that the use of Worksheet S-10 data in calculating the distribution of uncompensated care payments will continue CMS on a path to improve transparency and accuracy with regard to hospitals' share of uncompensated care costs. Other commenters noted that any negative effects from the transition to using the Worksheet S-10 will be eased due to the \$1.5 billion increase in the amount available to make uncompensated care payments relative to FY 2018. In addition, several commenters pointed to the evaluation performed by the consulting firm Dobson DaVanzo, which found a high degree of correlation between data reported on Worksheet S-10 and audited uncompensated care data, as evidence that the information currently reported on Worksheet S-10 is satisfactory for purposes of allocating uncompensated care payments.

Other commenters opposed the use of Worksheet S-10 to compute Factor 3 and allocate uncompensated care costs in FY 2019. Many of these commenters maintained

their position from previous years that, while Worksheet S-10 has the potential to serve as a more exact measure of hospital uncompensated care costs, the data reported are not presently a reliable and accurate reflection of these uncompensated care costs. The commenters also noted that the administrative burden for hospitals to complete Worksheet S-10 is high. These commenters asserted that CMS should suspend its use, or not advance its implementation, until the agency can demonstrate that the data being reported are accurate and consistent, or at least until FY 2021. Some commenters pointed to the evaluation performed by Dobson DaVanzo and asserted that, while the analysis demonstrated correlation between Worksheet S-10 and IRS Form 990, it did not address potentially significant differences in the reporting requirements for the forms.

Response: We appreciate the support for our proposal to continue incorporating Worksheet S-10 data into the computation of Factor 3 for FY 2019. We also appreciate the input from those commenters who are opposed to the use of data from Worksheet S-10 in the calculation of Factor 3. We understand the commenters' concerns about the limitations of the IRS 990 correlation analysis and the shortcomings of using the findings from this study to support assertions about the validity of the Worksheet S-10 data. Notwithstanding these limitations, a number of commenters supported the findings of the study and our proposal to use of Worksheet S-10 in FY 2019. Furthermore, as explained in the FY 2019 IPPS/LTCH PPS proposed rule, we did not make the decision to continue Worksheet S-10 implementation in FY 2019 based on the correlation analysis alone. Historical analyses performed by MedPAC also show a high level of correlation between audited uncompensated care data and uncompensated care costs reported on Worksheet

S-10 and a lower correlation between the audited uncompensated care data and Medicaid and SSI days. Furthermore, hospitals have expended considerable effort to resubmit their FY 2014 and FY 2015 data and the MACs have dedicated significant resources to conducting the subsequent reviews in the time available for the FY 2019 rulemaking, and we believe that, overall, those efforts have improved the data.

In the FY 2019 IPPS/LTCH PPS proposed rule, we stated that we could no longer conclude that alternative data to the Worksheet S-10 are available for FY 2014 and FY 2015 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. Our reviews of selected FY 2014 and FY 2015 data and the potential data aberrancies pointed out by commenters have not altered that conclusion. We continue to acknowledge that the Worksheet S-10 data are not perfect, but there are no perfect data sources available to us. We also acknowledge that the approximately \$1.5 billion increase in the overall amount available to make uncompensated care payments will help to mitigate the impact of any redistribution of uncompensated care payments due to the continued incorporation of Worksheet S-10 data on hospitals that serve a large number of Medicaid and SSI patients, yet report proportionately lower uncompensated care amounts.

Comment: Most commenters, whether supportive of or opposed to the use of data from Worksheet S-10 to compute Factor 3, believed that it was premature to use Worksheet S-10 data in the calculation of Factor 3 for FY 2019, and expressed concerns about the lack of accurate and consistent data being reported on Worksheet S-10, primarily due to what they perceive as a lack of clear and concise line-level instructions

for reporting on the Worksheet S-10. Some commenters acknowledged and appreciated the changes CMS had implemented through the issuance of revised instructions (Transmittal 11) in September 2017, and the opportunity for hospitals to revise their uncompensated care data previously reported on Worksheet S-10 for FY 2014 and FY 2015. These commenters also appreciated CMS' instructions to the MACs to contact hospitals with aberrant data. These commenters noted that, given all of the steps that CMS has taken to improve the data from Worksheet S-10, it would be reasonable to see large increases or decreases in hospital uncompensated care costs. Other commenters expressed continued concerns with the clarity of the instructions and indicated that even with the revisions implemented under Transmittal 11, a great deal of ambiguity remains in the Worksheet S-10 instructions, leading to inconsistent reporting among hospitals and questionable accuracy of the updated data.

Many commenters recognized the efforts undertaken by CMS in contacting select hospitals to verify reported data, and some commenters noted data improvements since the release of Transmittal 11 and CMS' subsequent contact with individual hospitals. However, a number of commenters provided specific examples of potentially aberrant data that they asserted are a result of the ambiguity of the Worksheet S-10 instructions. These examples of potentially aberrant data related in large part to the reporting of charity care charges and uninsured discounts on Worksheet S-10, Line 20, Columns 1 and 2. For example, commenters noted that some hospitals reported charity care coinsurance and deductibles of more than 25 percent of their total charity care charges; some hospitals reported charity care charges that were, on average, 80 percent of total

hospital charges; and some hospitals reported negative charity care charges. Several commenters also noted potentially aberrant data related to bad debt, including, for example, cases in which a hospital reported Medicare allowable bad debt elsewhere on the cost report, but those amounts were not reflected in its Worksheet S-10; hospitals that reported having more Medicare bad debt than total hospital bad debts; and hospitals with significant differences in bad debt charges over time. With respect to uncompensated care costs, commenters noted that, for example, some hospitals reported uncompensated care costs that were 30 to 70 percent of total hospital costs; and some hospitals reported uncompensated care costs that ranged from 0.14 percent to 250 percent of total hospital revenue. Commenters remarked that these results are implausible and indicate that CMS must continue working to improve the reliability of Worksheet S-10. Several commenters observed that the current Worksheet S-10 methodology may provide an incentive to hospitals to overstate charity care, compromising the fidelity of the information collected. Another commenter was concerned that the revisions to the Worksheet S-10 instructions through Transmittal 11 and subsequent opportunity for hospitals to resubmit their cost reports for prior years created an incentive for hospitals to inflate charges for charity care. Finally, some commenters requested that CMS continue to offer hospitals the opportunity to amend, or require them to amend, cost reports for FY 2014, FY 2015, and later years.

Response: We believe that continued use of Worksheet S-10 will improve the accuracy and consistency of the reported data. In addition, we intend to continue with and further refine our efforts to review the Worksheet S-10 data submitted by hospitals

based on what we have learned from the review process we conducted for the FY 2019 rulemaking. We also intend to consider the various issues raised by the commenters specifically related to the reporting of charity care and bad debt costs on Worksheet S-10 as we continue to review the Worksheet S-10 data and instructions. In addition, we will continue to work with stakeholders to address their concerns regarding the accuracy and consistency of reporting of uncompensated care costs through provider education and further refinement of the instructions to the Worksheet S-10 as appropriate.

As noted in the FY 2019 IPPS/LTCH PPS proposed rule, (83 FR 20396 and 20397), on September 29, 2017, we issued Transmittal 11, which clarified the definitions and instructions for reporting uncompensated care, non-Medicare bad debt, nonreimbursed Medicare bad debt, and charity care, as well as modified the calculations relative to uncompensated care costs and added edits to improve the integrity of the data reported on Worksheet S-10. We also provided another opportunity for hospitals to submit revisions to their Worksheet S-10 data for FY 2014 and FY 2015 cost reports. We refer readers to Change Request 10378, Transmittal 1981, titled “Fiscal Year (FY) 2014 and 2015 Worksheet S-10 Revisions: Further Extension for All Inpatient Prospective Payment System (IPPS) Hospitals,” issued on December 1, 2017 (available at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/2017Downloads/R1981OTN.pdf>). In this transmittal, we instructed MACs to accept amended Worksheets S–10 for FY 2014 and FY 2015 cost reports submitted by hospitals (or initial submissions of Worksheet S–10 if none have been submitted previously) and to upload them to the Health Care Provider Cost Report

Information System (HCRIS) in a timely manner. The transmittal stated that hospitals must submit their amended FY 2014 and FY 2015 cost reports containing the revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) to the MAC no later than January 2, 2018. Under the deadlines established in Change Request 10378, in order for revisions to be guaranteed consideration for the FY 2019 proposed rule, hospitals had to submit their amended FY 2014 and FY 2015 cost reports containing the revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) to the MAC no later than December 1, 2017. We also indicated that all revised data received by December 1, 2017, would be considered for purposes of the FY 2019 IPPS/LTCH PPS proposed rule, and all revised data received by the January 2, 2018 deadline would be available to be considered for purposes of the FY 2019 IPPS/LTCH PPS final rule. However, for the FY 2019 IPPS/LTCH PPS proposed rule, we were able to include data updated in HCRIS through February 15, 2018, and for this FY 2019 IPPS/LTCH PPS final rule, we have been able to include data updated in HCRIS through June 30, 2018. Specifically, in light of the impact of the hurricanes in 2017 (Harvey, Irma, Maria, and Nate), the extension of the deadline for resubmitting Worksheets S-10 for FY 2014 and FY 2015 through January 2, 2018, and our targeted provider outreach, we determined that it would be appropriate to use data updated through June 30, 2018, rather than the March 2018 HCRIS update, which we would typically use for the annual final rule. We believe that providing this additional time to allow data from resubmitted cost reports that may have been delayed due to the unique circumstances during 2017 and

2018 to be included in our calculations for purposes of this FY 2019 final rule, enabled us to use more accurate uncompensated care cost data in calculating the final Factor 3 values.

We believe that the new Worksheet S-10 instructions implemented in Transmittal 11 were sufficiently clear to allow hospitals to accurately complete Worksheet S-10, and that hospitals were provided ample time following the issuance of Transmittal 11 to revise and amend Worksheet S-10 for FY 2014 and FY 2015. Because we recognize that there were delays in processing Worksheet S-10 to reflect the revisions in Transmittal 11 and consistent with our historical practice of using the best data available, we are using the June 30, 2018 HCRIS update to calculate Factor 3 for this FY 2019 IPPS/LTCH PPS final rule. We continue to believe that Worksheet S-10 data are the best data available to use in calculating uncompensated care costs for purposes of determining Factor 3 of the uncompensated care payment methodology. As stated in the FY 2018 IPPS/LTCH PPS final rule, (82 FR 38203), the agency can no longer conclude that alternative data to the Worksheet S-10 are available for FY 2014 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. Similarly, we believe that the Worksheet S-10 data for FY 2014 are the best available data on the costs of subsection (d) hospitals for treating the uninsured during that fiscal year.

In response to the request by some commenters that CMS continue to offer hospitals the opportunity to amend, or require them to amend, cost reports for FY 2014, FY 2015 and later years, we are using data from a June 30, 2018 HCRIS update to determine Factor 3 for this FY 2019 IPPS/LTCH PPS final rule. We believe this gave

hospitals ample time to review the revised instructions in Transmittal 11, and to resubmit Worksheet S-10 for these years. Furthermore, as discussed earlier with respect to our estimates of Factors 1 and 2, we continue to believe that applying our best estimates to determine uncompensated care payment amounts prospectively would be most conducive to administrative efficiency, finality, and predictability in payments. We believe that, in affording the Secretary the discretion to estimate the amount of the three factors used to determine uncompensated care payments and by including a prohibition against administrative and judicial review of those estimates in section 1886(r)(3) of the Act, Congress recognized the importance of finality and predictability under a prospective payment system. As a result, we do not agree that we should continue to offer hospitals the opportunity to amend, or require them to amend their FY 2014 and FY 2015 cost reports for purposes of determining uncompensated care payments for FY 2019, as this would be contrary to the notion of prospectivity. To the extent these commenters were requesting a further opportunity to revise their Worksheet S-10 data for use in future rulemaking for FY 2020 or later years, we are not addressing the issue of future resubmissions in this final rule. Therefore, the normal timelines and procedures apply for a hospital to request to amend a cost report.

Comment: A number of stakeholders commented on Transmittal 10 (issued on November 17, 2016) in which we clarified that hospitals may include discounts given to the uninsured who meet the hospital's charity care criteria in effect for that cost reporting period and Transmittal 11 (issued on September 29, 2017) in which we clarified definitions and instructions for uncompensated care, non-Medicare bad debt, non-

reimbursed Medicare bad debt, and charity care; modified the calculations relative to uncompensated care costs; and added edits to ensure the integrity of Worksheet S-10 data. In general, the commenters appreciated the release of these transmittals, particularly the revisions issued in Transmittal 11. Several commenters believed that the release of Transmittal 11 was a step forward to improve the Worksheet S-10 instructions, reporting consistency, and data accuracy and quality, in addition to offering an opportunity for hospitals to revise their FY 2014 and FY 2015 Worksheet S-10 reports and instructing the MACs flag potentially aberrant data.

However, numerous commenters also expressed concerns with the release of the transmittals, noting that between Transmittal 10 and 11, there were significant changes in the instructions and clarifications that resulted in significant modifications to hospitals' reporting. One commenter also pointed out that CMS' requests for data resubmissions in both Transmittal 10 and Transmittal 11 were only 1 year apart, adding to hospitals' administrative burden. One commenter stated that, by the time Transmittal 11 was issued, hospitals had already filed their initial FY 2014 and FY 2015 cost reports, with some hospitals having already updated Worksheet S-10 data through amended cost reports. Several commenters believed that Transmittal 11 added significant strain on and caused confusion for hospitals.

Aside from these concerns about the timing of and differences between Transmittals 10 and 11, numerous commenters pointed out specific reasons as to why the guidelines were confusing and difficult to be carried out, especially with regard to the changes made in Transmittal 11. For example, one commenter pointed out that providers

that have already complied with CMS' updated instructions would not have to change submitted data. However, it was not clear from Transmittal 11 how hospitals were supposed to proceed in such a situation or if they simply had to calculate Worksheet S-10 data again and then resubmit.

Among the chief concerns raised by commenters regarding the release of Transmittal 11 was that hospitals did not have enough time or sufficient resources to revise their Worksheet S-10 data. According to commenters, the timeframe afforded by CMS was not long enough, given the administrative burden of complying with all of the changes in Transmittal 11. In addition, a few commenters pointed out that the Electronic Health Record audit by the Office of the Inspector General was earlier than the release of Transmittal 11, contributing to an even shorter timeline for hospitals to respond to changes in cost reporting for Worksheet S-10.

Many commenters also stated that among the factors contributing to restrict hospitals' ability to make timely revisions to their Worksheet S-10 data in response to Transmittal 11 were the limited personnel and financial resources available to make the changes in cost reporting outlined in Transmittal 11. The commenters also indicated that hospitals with inadequate internal financial management tracking systems were at an extreme disadvantage in meeting CMS' timeline.

On a related issue, many commenters stated that the software updates, which were required to accommodate the changes reflected in Transmittal 11, reduced the timeframe hospitals had to amend their cost reports by the deadline for inclusion in the proposed rule. At times, according to one commenter, the changes mandated by Transmittal 11

could not be executed by hospitals' information systems until a software update was possible, which likely did not coincide with the submission timeframe for the revisions.

Some commenters pointed out that the MACs' review of data following the issuance of Transmittal 11 largely focused on FY 2015 data, and perhaps paid much less attention to equally troubling FY 2014 data. Other commenters stated that only limited education efforts accompanied the issuance of Transmittal 11.

Response: We appreciate all of the comments raising concerns regarding Transmittals 10 and 11. However, we believe that hospitals were provided sufficient time to address the changes outlined in Transmittal 11 and to submit an amended Worksheet S-10 in time for it to be considered for the FY 2019 rulemaking, especially given our extension of the deadline to file resubmissions to January 2, 2018, as evidenced by the many hospitals that were able to resubmit their information by this deadline. Specifically, we issued Transmittal 11 on September 29, 2017, and indicated that all revised data received by December 1, 2017, would be considered for purposes of the FY 2019 IPPS/LTCH PPS proposed rule. In light of the 2017 hurricanes (Harvey, Irma, Maria, Nate), we provided a further opportunity for hospitals to revise their Worksheet S-10 data for both FY 2014 and FY 2015 through Change Request 10378, Transmittal 1981, titled "Fiscal Year (FY) 2014 and 2015 Worksheet S-10 Revisions: Further Extension for All Inpatient Prospective Payment System (IPPS) Hospitals," issued on December 1, 2017. This change request stated that hospitals needed to submit revised data by January 2, 2018. In this transmittal, we instructed MACs to accept amended Worksheets S-10 for FY 2014 and FY 2015 cost reports submitted by hospitals (or initial

submissions of Worksheet S-10 if none had been submitted previously) and to upload them to HCRIS in a timely manner. Based on the significant number of resubmissions, we believe that hospitals were given ample time to revise and amend their Worksheets S-10 for FY 2014 and FY 2015 to reflect the instructions in Transmittal 11.

Regarding the confusion Transmittal 11 may have caused among stakeholders, we note Transmittal 11 was designed to be responsive to previous stakeholder concerns regarding Worksheet S-10, such as reporting of uninsured patient discounts and the modification of certain calculations to account for nonreimbursable Medicare bad debt. We also note that some commenters indicated that Worksheet S-10 instructions, consistency, and data accuracy have improved as a result Transmittal 11. However, we recognize that there are continuing opportunities to further improve guidance and education, and we will continue to work with our stakeholders to address their concerns through provider education and further refinement of the instructions.

Comment: Several commenters provided specific merger information and requested that CMS include these mergers in determining Factor 3 for FY 2019 payments. Several commenters noted other inaccuracies in the FY 2019 Proposed Rule Supplemental Data File, such as incorrect merger information errors in claims average calculations.

Response: We thank the commenters for their input. We have updated our list of mergers based on information received by the MACs as of June 2018. In addition, we have reviewed the commenters' submissions regarding mergers not previously identified in the proposed rule and have updated our list accordingly. We note that, under the

policy finalized in FY 2015 IPPS/LTCH PPS final rule, a merger is defined as an acquisition where the Medicare provider agreement of one hospital is subsumed into the provider agreement of the surviving provider (79 FR 50020). We have also corrected the other inaccuracies identified by commenters, and will continue to pay diligent attention to data inaccuracies and work internally and with our contractors to resolve these issues in a timely manner.

Comment: Numerous commenters expressed concerns that HCRIS data do not reflect hospital submissions in response to Transmittal 11. For example, one commenter pointed out that the March HCRIS data update still reflects data reported under the Transmittal 10 instructions rather than the Transmittal 11 instructions for a large number of hospitals. Commenters also expressed that, given problems with some amended cost reports not automatically being reprocessed with the Transmittal 11 calculation modification, the May 31, 2018 HCRIS file will provide the best data in determining Factor 3.

Several commenters specifically requested that their cost data in the proposed FY 2019 DSH Supplemental Data File be updated in a timely manner to reflect the latest HCRIS information in order ensure that their Factor 3 for FY 2019 accurately reflects their uncompensated care costs. A few commenters also expressed concerns that many hospitals were still having challenges in resubmitting their corrections to Worksheet S-10 data and having them accepted by the MACs. One commenter urged CMS to validate the information in HCRIS before pulling data for the proposed and final rules. Another

commenter suggested that CMS implement an alternative means for hospitals to submit cost report data to alleviate burden on hospitals and improve accuracy.

Response: We appreciate the commenters' diligence in checking that their own reports were properly reprocessed under Transmittal 11. We also understand their concerns regarding the timeliness of updates to the HCRIS data. We recognize that hospitals' data in the March HCRIS update may not have reflected all corrections made to Worksheet S-10 data in response to Transmittal 11. Although we instructed MACs to accept amended Worksheets S-10 for FY 2014 and FY 2015 cost reports submitted by hospitals (or initial submissions of Worksheet S-10 if none had been submitted previously) and to upload them to HCRIS in a timely manner, we recognize that there were unusual delays in processing the amended Worksheets S-10 to reflect the revisions in response to Transmission 11. Consistent with our historical practice of using the best data available, and due to the unique circumstances that affected hospitals' ability to resubmit Worksheet S-10, as discussed in the proposed rule, and the delays in processing by the MACs, we used a June 30, 2018 HCRIS update to calculate Factor 3 for this FY 2019 IPPS/LTH PPS final rule.

We have not previously been able to use such a recent update of HCRIS for purposes of the annual rulemaking, and it was operationally challenging to take the steps necessary to be able to use a June 30, 2018 update to calculate Factor 3 for FY 2019. The time required to complete the public use file process, which involves interactions with the MACs to ensure all reports have been appropriately included, would have exceeded the time we had available. In order to have the data with a bare minimum of time to use it in

performing our calculations for the final rule, we needed to use a new expedited ad hoc process outside of the established process normally used to develop the public use file. We were not sure it even would be feasible to develop such an expedited ad hoc process. Ultimately, in order to develop the expedited process that was used, we had to bypass some of the safeguards built into the ordinary process and forgo our opportunity to further review the data. Given the unique circumstances that affected hospitals' ability to resubmit their Worksheet S-10 for FY 2014 and/or FY 2015, and the delays in processing by the MACs, we concluded that the potential to include additional, revised data for the final rule outweighed the risk that we might not include a report that would have been properly included had we been able to follow the usual process for preparing a public use file. Therefore, under ordinary circumstances, we would not even have contemplated this approach because the additional review time afforded by the use of the March extract under the established public use file process is important from an enhanced quality assurance standpoint and the benefits of this enhanced quality assurance were only outweighed by the extenuating circumstances affecting the timeline for both the resubmission of Worksheet S-10 data and the review of these data by the MACs in time to allow the data to be considered in this final rule.

Following the publication of this final rule, hospitals will have until August 31, 2018, to review and submit comments on the accuracy of the table and supplemental data file published in conjunction with this final rule relative to information they submitted to their MAC by the deadlines prescribed in Transmittal 11 and Change Request 10378.

Comment: Some commenters expressed specific concerns related to possible violations of the Administrative Procedure Act by CMS. These commenters suggested that any final rule issued by CMS that disregards information in the rulemaking record, including copies of revised Worksheets S-10, that are submitted as attachments to comments, would violate the Administrative Procedure Act because it would not be supported by substantial evidence. The commenters urged CMS to calculate Factor 3 with the best possible data. One commenter also asserted that CMS is not upholding its statutory obligation unless it continues to accept updated Worksheets S-10 for the duration of time that the rulemaking period is open. The commenter cited the decision in *Baystate Medical Center v. Leavitt*, in which CMS was instructed to use the best data available to determine Medicare DSH payments under section 1886(d)(5)(F) of the Act. Another commenter also noted that, in the FY 2019 IPPS/LTCH PPS proposed rule, CMS proposed to use a May 31, 2018 HCRIS update for Factor 3 calculations in the final rule. The commenter stated that this proposal could lead to a situation where hospitals see their final uncompensated care payment amounts only in the final rule, and thus the hospitals would not have the ability to comment on these amounts, which the commenter suggests is in violation of both the Administrative Procedure Act and the Medicare statute.

One commenter also suggested that CMS allow for administrative or judicial review of its Medicare DSH payment calculations, which would provide an important check if the agency makes errors in the calculations. One commenter also asked CMS to reconsider its decision not to reconcile final payments for uncompensated care with

actual data for cost reporting periods during FY 2019. One commenter included a request to reopen its cost reports for FY 2014 and FY 2015 to make corrections.

Response: We appreciate commenters' concerns regarding Factor 3 calculations and the importance of using the best available data. In response to these concerns, and in light of the considerations we have previously discussed, we used a June 30, 2018 HCRIS update to perform the Factor 3 calculations for this FY 2019 IPPS/LTCH PPS final rule, which was the best data available for purposes of this final rule.

Unless the relevant information was also reflected in the June 30, 2018 HCRIS update, we have not considered information from any revised Worksheets S-10 that were submitted as attachments to comments. We do not believe it would be appropriate to allow a hospital to use the rulemaking process to circumvent the requirement that cost report data need to be submitted to the MAC or the requirement that requests to reopen cost reports need to be submitted to the MAC. Otherwise we would have multiple potentially conflicting sources of information about a hospital's uncompensated care data or, more broadly, any cost report data that might be submitted during the rulemaking process. In addition, there are validity checks and other safeguards incorporated into the cost report submission process that would not be automatically applied to cost reports only submitted through rulemaking.

Furthermore, as noted earlier, under the deadlines established in Change Request 10378, we stated that all amended FY 2014 and FY 2015 cost reports containing a revised Worksheet S-10 (or a completed Worksheet S-10 if no data were included on the previously submitted cost report) received by January 2, 2018 would be available to be

considered for purposes of the FY 2019 IPPS/LTCH PPS final rule. This date was important to allow sufficient time for reviews by MACs for potentially aberrant reports prior to the FY 2019 PPS/LTCH PPS final rule.

Also, as discussed earlier, we continue to believe that using the best data available to prospectively estimate Factor 3 is most conducive to administrative efficiency, finality, and predictability in payments (78 FR 50628; 79 FR 50010; 80 FR 49518; 81 FR 56949; and 82 FR 38195). Further, we believe that, in affording the Secretary the discretion to estimate the amount of the three factors used to determine these uncompensated care payments and by including a prohibition against administrative and judicial review of those estimates in section 1886(r)(3) of the Act, Congress recognized the importance of finality and predictability under a prospective payment system. In light of this preclusion, we do not have the ability to allow for administrative or judicial review of our estimates.

Regarding the concerns related to the Administrative Procedure Act, we note that, under the Administrative Procedure Act, a proposed rule is required to include either the terms or substance of the proposed rule or a description of the subjects and issues involved. In this case, the FY 2019 IPPS/LTCH PPS proposed rule included a detailed discussion of our proposed methodology for calculating Factor 3 and the data that would be used. We made public the best data available at the time of the proposed rule, in order to allow hospitals to understand the anticipated impact of the proposed methodology. Moreover, following the publication of the proposed rule, we continued our efforts to ensure that information hospitals properly submitted to their MAC in the prescribed

timeframes would be available to be used in this final rule in the event we finalized our proposed methodology. We believe the fact that we provided data with the proposed rule while concurrently continuing to review that data with individual hospitals is entirely consistent with the Administrative Procedure Act. There is no requirement under either the Administrative Procedure Act or the Medicare statute that CMS make the actual data that will be used in a final rule available as part of the notice of proposed rulemaking. Rather, it is sufficient that we provide stakeholders with notice of our proposed methodology and the data sources that will be used, so that they may have a meaningful opportunity to submit their views on the proposed methodology and the adequacy of the data for the intended purpose. This requirement for notice and comment does not, however, extend to a requirement that we make all data that will be used to compute payments available to the public, so that they may have an opportunity to comment on accuracy of the data reported for individual hospitals. Similarly, there is no requirement that we provide an opportunity for comment on the actual payment amounts determined for each hospital.

Comment: Many commenters recommended that CMS delay the use of data from Worksheet S-10 for at least 1 year, and up to 3 years until FY 2021, as CMS had originally stated in its FY 2017 IPPS/LTCH PPS final rule, or until CMS has put processes in place to ensure accurate and consistent submissions by all hospitals as discussed in the FY 2018 IPPS/LTCH PPS final rule. Many commenters believed that this delay would allow hospitals the time to absorb the changes they have to make in order to better report their uncompensated care costs on the Worksheet S-10, as well as to

prepare for potential losses due to policy changes. The commenters also believed that this delay will allow CMS the time to analyze how hospitals have responded to the changes to the Worksheet S-10 that have already been implemented, identify problems that still remain, and develop an action plan moving forward. Specifically, a significant number of commenters requested that CMS further educate hospitals on how to accurately and consistently complete the Worksheet S-10 “before advancing the transition to a greater use of Worksheet S-10 data.” Although many commenters discussed how the CMS’ current educational efforts – release of Transmittal 11, a Medicare Learning Network Matters article, along with Frequently Asked Questions document – were welcome and served as much needed guidance for the field, they provided recommendations for CMS to continue to partner with stakeholders in addressing these and other outstanding issues. Several commenters expressed their willingness and readiness to continue work with the agency in this particular area.

Response: We acknowledge the concerns raised by commenters regarding our proposal to use data from Worksheet S-10 in the calculation of Factor 3 for FY 2019. However, as we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20394), when weighing the new information that has become available to us since the FY 2017 rulemaking in conjunction with the information regarding Worksheet S-10 data against the low-income days proxy that we have analyzed as part of our consideration of this issue in prior rulemaking, we can no longer conclude that alternative data to the Worksheet S-10 are available that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. We also note that, as part of our

ongoing quality control and data improvement measures to continue to improve the Worksheet S-10 data over time, we have revised the cost report instructions (Transmittal 11) and are currently developing an audit process. Continuing our education efforts of past years, we will continue to work with stakeholders to address their concerns regarding the Worksheet S-10 data through further provider education.

Comment: Many commenters urged CMS to implement a full desk auditing process to ensure the accuracy and consistency of the Worksheet S-10 data. A large proportion of the commenters requested an audit process that would be as rigorous, detailed, and thorough as the process used for the hospital wage index, as opposed to the less rigorous HITECH audits. In addition to auditing negative, missing, or suspicious values, many commenters also requested that CMS audit the revised data resubmitted by hospitals as a result of the release of Transmittal 11. One commenter believed that the Worksheet S-10 data needs real auditing, thorough auditing, professional auditing, and not the mere desk auditing that CMS previously indicated will be introduced in 2020. Another commenter recommended an alternative audit approach of “probe and educate” as it has been used to review data submitted for Medicaid DSH, where hospitals are allowed a grace period before the results of audits lead to financial consequences. Regardless of the approach, many commenters stated that they cannot overemphasize the importance of auditing the Worksheet S-10 data, given the inaccurate, inconsistent, and anomalous reporting of these data, as well as the data’s crucial role in the distribution of Medicare DSH uncompensated care payments, which these commenters viewed as finite and an example of a “classic zero-sum game.” A few commenters explained that this is

because for every additional dollar gained by a hospital, which could be a result of inaccurate and inconsistent reporting, another hospital must lose a dollar. Several commenters also asked CMS to implement edits within the cost report to ensure internal consistency between the amounts for data elements that must be reported on several different worksheets and that the reported amounts equal calculated amounts.

Many commenters disagreed with CMS' stance on not sharing desk review and audit protocols with hospitals. These commenters pointed out that CMS has indicated that such protocols are confidential, but they believe this opacity could lead to inconsistencies in the reporting of Worksheet S-10 data and different interpretations of the Provider Reimbursement Manual among hospitals and even MACs. The commenters encouraged CMS to release the audit criteria for non-Medicare bad debt and charity care claimed on Worksheet S-10.

One commenter believed that CMS and the MACs hide behind the "bar to judicial review" that exists under the provisions of the statute governing the determination of uncompensated care payments, and this allows the MACs to commit outright errors that go unchecked if a hospital is otherwise unable to convince the MAC of the error. A few commenters expressed disappointment with what they characterized as the inconsistent and arbitrary decisions made by MACs in their reviews of Worksheet S-10 data and expressed the need for CMS to provide guidance to MACs to clarify which uninsured discounts CMS expects MACs to accept when reported on amended and/or corrected cost reports. Commenters pointed out that MACs may lack sufficient guidance, instruction, and training with respect to the inclusion of all discounts under the hospital's financial

assistance policy in Line 20 of Worksheet S-10. For example, one commenter mentioned that some hospitals have experienced MAC audit disallowances of certain charity care and uninsured costs reported on Worksheet S-10 and stated that such disallowances can be egregious and cause significant reductions in the hospitals' uncompensated care payments. Commenters also suggested that these disallowances highlight the need for more upfront guidance and clearly defined terms as well as consistency by the MACs in the application of that guidance in their reviews.

Several commenters also were concerned or believed that MACs had created their own audit protocols for the Worksheet S-10 for purposes of auditing Electronic Health Record incentive payments under the HITECH Act without any guidance from CMS, and that any disparate interpretations could create disparities in the accuracy of the data across MACs. This, according to one commenter, allows MACs' audits to be subject to open interpretation. Another commenter expressed concern that the MACs are overstepping their authority to determine what the requirements for hospitals' financial assistance policies should be, when in fact hospitals are free to determine these requirements. The commenter also stated that the IRS already reviews and ensures that hospitals follow their financial assistance policy, and therefore there is no need for CMS and the MACs to duplicate its efforts.

Response: With respect to the audit process, in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56964), we stated that we intended to provide standardized instructions to the MACs to guide them in determining when and how often a hospital's Worksheet S-10 should be reviewed. To the extent the commenters are referring to concerns with EHR

incentive payment audits, CMS strives to take lessons learned from these audits to improve the audits of Worksheet S-10 for purposes of Medicare DSH uncompensated care payments. We indicated that we would not make the MACs' review protocol public, as all CMS desk review and audit protocols are confidential and are for CMS and MAC use only. The instructions for the MACs are still under development and will be provided to the MACs as soon as possible and in advance of any audit. We refer readers to the FY 2017 IPPS/LTCH PPS final rule for a complete discussion concerning the issues that we are considering in developing the instructions that will be provided to the MACs. Due to the overwhelming feedback from commenters emphasizing the importance of audits in ensuring the accuracy and consistency of data reported on the Worksheet S-10, we expect audits to begin in the Fall of 2018. We also will continue to work with stakeholders to address their concerns regarding the accuracy and consistency of data reported on the Worksheet S-10 through provider education and further refinement of the instructions for the Worksheet S-10 as appropriate.

Comment: Many commenters supported CMS' proposal to use a 3-year average to calculate Factor 3 for FY 2019. Other commenters opposed the use of Worksheet S-10 data to determine Factor 3 for FY 2019 and also provided suggestions for modified or alternative methodologies to calculate Factor 3 in FY 2019 and beyond. Many of the commenters recommended a delay of at least 1 year to allow for further refinement of the Worksheet S-10 instructions and the development of audit protocols to identify and remove aberrant uncompensated care costs. One commenter asked that CMS consider a permanent 50-50 percent blend of the low-income insured days proxy data and

Worksheet S-10 data. Other commenters suggested that CMS freeze the methodology used in calculating Factor 3 for FY 2018, under which we used 2 years of low-income insured days data and 1 year of Worksheet S-10 data, for the foreseeable future. Some commenters who suggested this freeze also recommended using Worksheet S-10 data from FY 2015 for the FY 2019 rulemaking, rather than FY 2014 data, reasoning that FY 2015 data are more likely to be consistently reported than FY 2014 data. One commenter suggested that CMS consider a proxy that would use SSI days to adjust the uncompensated care costs used in calculating Factor 3 starting in FY 2020.

Many commenters approved of the proposal to phase-in the use of data from the Worksheet S-10. However, other commenters had other varying opinions regarding the length of the phase-in period. Some commenters agreed with the proposal to continue the 3-year phase-in. However, other commenters requested that CMS consider a longer phase-in period or delay the transition to the use of Worksheet S 10 data. These commenters recommended a minimum 5-year transition period to gradually phase-in the use of Worksheet S-10 data, once the data have been audited. According to the commenters, this longer phase-in would mitigate the effect on hospitals of the redistribution in uncompensated care payments resulting from the inclusion of data from the Worksheet S-10.

Some commenters stated that the proposed methodology of using 1 year of low-income insured days and 2 years of uncompensated care data from Worksheet S-10 to compute uncompensated care payments for FY 2019 would be highly redistributive, and some commenters asked that CMS implement a stop-loss policy to protect hospitals

that lose 5 to 10 percent in DSH payments in any given year as a result of transitioning to the use of Worksheet S-10 data. These commenters suggested that this stop-loss policy should extend beyond the 3-year phase-in to help hospitals with decreasing uncompensated care payments that are disproportionately affected by the transition to Worksheet S-10 data adjust to their new payment levels. However, another commenter noted that a stop-loss policy would not be warranted, given that a 3-year phase-in is an appropriate way to temporarily reduce the impact of new provisions.

Response: We appreciate the commenters' support for our proposal to use a 3-year average in the calculation of Factor 3 for FY 2019. We also appreciate the comments regarding alternative ways to blend prior years' data for purposes of incorporating Worksheet S-10 data into the calculation of Factor 3 and the suggestions for alternative methods for computing proxies for uncompensated care costs. However, our primary reason for using a 3-year average is to provide assurance that hospitals' uncompensated care payments will remain reasonably stable and predictable, and less subject to unpredictable swings and anomalies in a hospital's low-income insured days or reported uncompensated care costs between cost reporting periods. While the 3-year average effectively functions as a transition from the use of the low-income insured days proxy to the use of Worksheet S-10 data, that is not its purpose. Furthermore, as we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20394), we can no longer conclude that alternative data to the Worksheet S-10 are available for FY 2014 and FY 2015 that are a better proxy for the costs of subsection (d) hospitals for treating individuals who are uninsured. Therefore, we disagree with commenters who suggested

the use of a longer phase-in or alternative blends to determine Factor 3 for FY 2019 in order to provide for an extended transition to the use of the Worksheet S-10. We note that the proposals in the FY 2019 IPPS/LTCH PPS proposed rule were limited to FY 2019, and that we did not make any proposals with respect to the data that would be used to calculate Factor 3 for subsequent years. As a result, it would be premature for CMS to establish policies regarding the data that will be used to determine Factor 3 for future years in this final rule. We will consider the commenters' suggestions for further incorporating Worksheet S-10 into the calculation of Factor 3, or computing proxies for uncompensated care costs using a blend of Worksheet S-10 data, low-income insured days, or other data sources, as we develop our proposed policies for determining uncompensated care payments for FY 2020 and subsequent years.

Regarding the commenters' recommendation that we adopt a stop-loss policy, we believe that the use of 3 years of data to determine Factor 3 for FY 2019 already provides assurance that hospitals' uncompensated care payments will remain reasonably stable and predictable, and would not be subject to unpredictable swings and anomalies in a hospital's low-income insured days or reported uncompensated care costs. As a result, because there is already a mechanism that has the effect of smoothing the transition from the use of low-income insured days to the use of Worksheet S-10 data in place, we do not believe a stop-loss policy is necessary.

Comment: A few commenters stated that the current CCR trimming methodology is not adequate to address the data anomalies in the Worksheet S-10 data reported by certain hospitals. Other commenters supported the current methodology. A few

commenters also stated that hospitals that have been identified as potential outliers should have the opportunity to explain their data and correct errors before the trim methodology is applied, which would facilitate data validity. Other commenters requested that the trimming methodology not be finalized until an audit of the data has been conducted, and that hospitals with extremely high CCRs be audited and an appropriate CCR determined instead of applying an arbitrary trim to a statewide average. Several commenters expressed concern over the proposed trim methodology because hospitals that are considered “all-inclusive rate providers” are not required to complete Worksheet C, Part I, which is used for reporting the CCR on Line 1 of the Worksheet S-10. Commenters noted that, as a result, the proposed trim methodology inappropriately modifies their uncompensated care costs, and that a high CCR could be accurate if the hospital’s charges are close to costs, as is usually the case for all-inclusive rate hospitals. One commenter noted that CMS is proposing to continue to use the low-income patient day proxy to distribute Medicare DSH uncompensated care payments to all-inclusive rate providers. The commenter encouraged CMS to engage with hospitals in determining the best way to use Worksheet S-10 data to distribute uncompensated care payments to all-inclusive rate providers in the future and also recommended that CMS assess how the current CCR trim methodology would affect all-inclusive rate providers.

Response: We appreciate the additional information provided by the commenters related to applying trims to the CCRs. We intend to further explore which trims are most appropriate to apply to the CCRs on Line 1 of Worksheet S-10, including whether it would be appropriate to apply a unique trim for certain subsets of hospitals, such as

all-inclusive rate providers. We note that all-inclusive rate providers have the ability to compute and enter their appropriate information (for example, departmental cost statistics) on Worksheet S-10, Line 1, by answering “Yes” to the question on Worksheet S-2, Part I, Line 115, rather than having it computed using information from Worksheet C, Part I. We intend to give additional consideration to the utilization of statewide averages in place of outlier CCRs, and will also consider other approaches that could ensure the validity of the trim methodology, while not penalizing hospitals that use alternative methods of cost apportionment. We may consider incorporating these alternative approaches through rulemaking for future years. However, as we have previously discussed, because all-inclusive rate providers have charge structures that differ from other IPPS hospitals, we did not propose to use data from the Worksheet S-10 to determine Factor 3 for these hospitals for FY 2019. Instead, we have determined Factor 3 for these hospitals using low-income insured days for FY 2013.

Regarding the commenters’ view that CCR trims should not take place before we conduct audits and give providers further opportunities to explain or amend their data, we agree that, in an ideal circumstance, CCR trims without audits would not be needed. However, providers have had sufficient time to amend their data and/or contact CMS to explain that the FY 2019 DSH Supplemental Data File posted in conjunction with FY 2019 IPPS/LTCH PPS proposed rule had incorrect data. As a result, we consider CCRs greater than 3 standard deviations above the national geometric mean CCR for the applicable fiscal year to be aberrant CCRs. We are finalizing the trim methodology as proposed.

Comment: Many commenters requested that the cost of graduate medical education (GME) be included within the CCR calculation to account for the costs associated with the training of interns and residents. The commenters stated that not only does GME represent a significant portion of the overhead costs of teaching hospitals, but these trained interns and residents treat patients from all financial backgrounds, including the uninsured. Therefore, the commenters believed that including GME costs in the CCR calculation and then using this adjusted CCR for Worksheet S-10 would more accurately represent the true uncompensated care costs for teaching hospitals. Some commenters observed that GME is included in the denominator but not the numerator of the Worksheet S-10 CCR and that this discrepancy should be rectified. One commenter noted that this inconsistency occurs because Line 1 uses data from Worksheet C, Column 3 (“costs,” which do not include GME) and Worksheet C, Column 8 (“charges,” which do include GME). Commenters recommended using the “costs” definition from Worksheet B, Part I, Column 24, Line 118 to reconcile the discrepancy. Other commenters requested that the Reasonable Compensation Equivalency (RCE) be removed from the calculation of the CCR. One commenter stated that the current Worksheet S-10 ignores substantial costs hospitals incur in training medical residents, supporting physician and professional services, and paying provider taxes associated with Medicaid revenue. Therefore, this commenter recommended that CMS use the total of Worksheet A, Column 3, Lines 1 through 117, reduced by the amount on Worksheet A-8, Line 10, as the cost component of the CCR; and use Worksheet C, Column 8, Line 200, as the charge component. The commenter noted that this result would more accurately

reflect the true cost of hospital services compared with the CCR currently used in Worksheet S-10.

Response: As we have stated previously in response to this issue, we believe that the purpose of uncompensated care payments is to provide additional payment to hospitals for treating the uninsured, not for the costs incurred in training residents. In addition, because the CCR on Line 1 of Worksheet S-10 is pulled from Worksheet C, Part I, and is also used in other IPPS ratesetting contexts (such as high-cost outliers and the calculation of the MS-DRG relative weights) from which it is appropriate to exclude GME because GME is paid separately from the IPPS, we hesitate to adjust the CCRs in the narrower context of calculating uncompensated care costs. Therefore, we continue to believe that it is not appropriate to modify the calculation of the CCR on Line 1 of Worksheet S-10 to include GME costs in the numerator.

With regard to the comment that the CCRs on Worksheet S-10 are reported with the RCE limits applied, we believe the commenter is mistaken. Line 1 of Worksheet S-10 instructs hospitals to compute the CCR by dividing the costs from Worksheet C, Part I, Line 202, Column 3, by the charges on Worksheet C, Part I, Line 202, Column 8. The RCE limits are applied in Column 4, not in Column 3; thus, the RCE limits do not affect the CCR on line 1 of Worksheet S-10.

Comment: Several commenters supported the proposed definition of uncompensated care as charity care plus non-Medicare bad debt. However, some commenters suggested that uncompensated care should include shortfalls from Medicaid, CHIP, and State and local indigent care programs. The most common concern expressed

was the exclusion of Medicaid shortfalls from the definition of uncompensated care as captured by Worksheet S-10. Commenters stated that excluding Medicaid shortfalls from the definition of uncompensated care severely penalizes hospitals that care for large numbers of Medicaid patients because many States do not fully cover the costs associated with newly insured Medicaid recipients. One commenter noted that just because patients are covered by Medicaid does not mean that they have no remaining uncompensated care costs, and that, as the policy stands now, Medicare will significantly subsidize those States with Medicaid payment rates that cover the cost of care relative to those with lower Medicaid payment rates that do not cover the cost of care. However, some commenters noted that Worksheet S-10 provides an incomplete picture of Medicaid shortfalls and should be revised to instruct hospitals to deduct intergovernmental transfers, certified public expenditures, and provider taxes from their Medicaid revenue. One commenter questioned why CHIP and indigent care data are collected on Worksheet S-10 if there is no plan to utilize this information in the calculation of Factor 3.

Several commenters urged CMS to use Worksheet S-10, Line 31 to identify a hospital's share of uncompensated care costs rather than Line 30. These commenters did not believe that Line 30 adequately captures a hospital's uncompensated care because it excludes unreimbursed costs for State and local indigent care programs. Commenters also believed that CMS' use of Line 30 results in a mismatch between payment and costs for care furnished to the uninsured and underinsured due to lack of clear reporting guidelines. The commenters believed that this is because many States support uncompensated care through supplemental Medicaid programs funded through their

Federal Medicaid DSH allotment or a Medicaid waiver program. The commenters stated that these supplemental payments are likely reported on Worksheet S-10 as Medicaid revenue while some of the hospital's uncompensated care costs are reported as charity care, as such reporting was at a hospital's discretion at the time of cost report filing.

In addition to comments about the Medicaid shortfalls, commenters observed that States differ in how they define uncompensated care costs, and that not all costs incurred by hospitals in treating the uninsured are categorized as charity care and bad debt, such as in the case of discounts to the uninsured who are unable to pay or unwilling to provide means-tested information. One commenter supported CMS' definition of uncompensated care costs as the cost of all charity care and non-Medicare bad debt but expressed concerns with the proposed expansion under Transmittal 10 to include discounts to the uninsured. The commenter stated that its health system has a long history of providing discounts to the uninsured through a voluntary agreement with the Attorney General's Office. The commenter also argued that higher adoption of high-deductible health plans should be considered.

Response: In general, we will attempt to address commenters' concerns through future cost report clarifications to further improve and refine the information that is reported on Worksheet S-10 in order to support collection of the information necessary to implement section 1886(r)(2) of the Act. With regard to the comments regarding Medicaid shortfalls, we recognize commenters' concerns but continue to believe there are compelling arguments for excluding Medicaid shortfalls from the definition of uncompensated care, including the fact that several key stakeholders, such as MedPAC,

do not consider Medicaid shortfalls in their definition of uncompensated care, and that it is most consistent with section 1886(r)(2) of the Act for Medicare uncompensated care payments to target hospitals that incur a disproportionate share of uncompensated care for patients with no insurance coverage.

Conceptual issues aside, we note that even if we were to adjust the definition of uncompensated care to include Medicaid shortfalls, this would not be a feasible option at this time due to computational limitations. Specifically, computing such shortfalls is operationally problematic because Medicaid pays hospitals a single DSH payment that in part covers the hospital's costs in providing care to the uninsured and in part covers estimates of the Medicaid "shortfalls." Therefore, it is not clear how CMS would determine how much of the "shortfall" is left after the Medicaid DSH payment is made. In addition, in some States, hospitals return a portion of their Medicaid revenues to the State via provider taxes, making the computation of "shortfalls" even more complex.

With regard to the comments that States differ in how they define uncompensated care costs, and that hospitals' costs of treating the uninsured are not always categorized as charity care and bad debt, such as in the case of discounts to the uninsured who are unable to pay or unwilling to provide income information, we believe the commenters are referring to the Worksheet S-10 instructions for Line 20, revised in Transmittal 10, which state, in part, "Enter in column 1, the full charges for uninsured patients and patients with coverage from an entity that does not have a contractual relationship with the provider who meet the hospital's charity care policy or FAP." We believe that hospitals have the discretion to design their charity care policies as appropriate and may include discounts

offered to uninsured patients as “charity care.” Accordingly, for the reasons discussed in the proposed rule and previously in this final rule, we are finalizing our proposal to define uncompensated care costs as the amount on Line 30 of Worksheet S–10, which is the cost of charity care (Line 23) and the cost of non-Medicare bad debt and non-reimbursable Medicare bad debt (Line 29).

Comment: Many commenters had several specific concerns regarding the instructions for reporting charity care and Medicare bad debt on the Worksheet S-10. Commenters acknowledged that while Transmittal 11 helped provide clarification, certain aspects of the instructions remain vague and ambiguous. For example, one commenter asked whether non-Medicare bad debt expenses must meet requirements equivalent to the statutory requirements applicable to Medicare bad-debt as described in CMS Pub. 15-1 Chapter 3. In addition, some commenters questioned whether guidance related to the recognition of bad debt expense for purposes of Medicare bad debts is also applicable for non-Medicare bad debt. A few commenters also suggested that CMS allow bad debt related to unpaid coinsurance and deductibles to be included on the Worksheet S-10 without multiplying these amounts by the CCR, similar to the modification made for charity care.

A few commenters also expressed concerns about the Financial Accounting Standards Board (FASB) update 2014-09 Topic 606. These commenters noted that the FASB guidelines indicate that bad debt is to be reported based on historical experience and that recoveries may not correlate to reported bad debt expense on the general ledger.

Specifically, commenters asked that CMS address whether bad debt should still be reported net of recoveries on the Worksheet S-10.

Several commenters also expressed concerns that instructions pertaining to Worksheet S-10, Line 20 are not clear. The commenters stated, for example, that many hospitals incorrectly report “insured” charity care on Worksheet S-10, Line 20, Column 2 (which is not reduced by CCR), citing, as an example, noncovered Medicaid charges, which need to be reported as “uninsured” on Worksheet S-10 and reduced by CCR, as stated in the Worksheet S-10 instructions. The commenters pointed out that this inconsistency with respect to the reporting of charity care costs is commonly due to misinterpretation of instructions because of lack of clarity, and may be contributing to the overstatement of charity care costs.

Several commenters also pointed out that some hospitals may interpret the instructions literally, while other hospitals do not. The commenters asked CMS to correct this uncertainty and ambiguity to avoid inconsistent interpretations. In relation to this, one commenter asserted that contradictory and confusing language in the instructions leaves key terms undefined, such as determination of uninsured status. The commenter believed that the focus in determining whether a patient is “uninsured” should be on whether the patient has coverage for the specific services provided, in the same manner that CMS defines “uninsured” and “no health insurance” for purposes of Medicaid DSH.

Some commenters questioned whether guidance on determining indigence of a Medicare beneficiary should be applicable to non-Medicare patients to determine whether

charity care was furnished. Several commenters also suggested improvements that could be made to the instructions of Worksheet S-10, such as adding a requirement to report utilization data to add context to the monetary amounts reported for uncompensated care.

Response: We thank commenters for sharing their concerns and making suggestions regarding potential revisions to the instructions for Worksheet S-10. Some of these questions and concerns have been raised in previous rulemaking. (For example, we refer readers to the related discussion in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38219 and 38220).) We also note that a number of these questions and concerns are addressed by the updated instructions for Worksheet S-10 that were issued in November 2016 through Transmittal 10, as well as those issued on September 2017 through Transmittal 11, where we clarified definitions and the instructions for reporting uncompensated care, non-Medicare bad debt, nonreimbursed Medicare bad debt, charity care, and modified the calculations relative to uncompensated care costs. Additional reference materials include the MLN article titled “Updates to Medicare’s Cost Report Worksheet S-10 to Capture Uncompensated Care Data”, available at <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/Downloads/SE17031.pdf> as well as the Worksheet S-10 Q&As on the CMS DSH website in the download section, available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Downloads/Worksheet-S-10-UCC-QandAs.pdf>. To the extent that commenters have raised new questions and concerns, we will continue to

work with stakeholders to address their questions and concerns through further refinement of the instructions to the Worksheet S-10 as appropriate.

Comment: Several commenters supported the proposal to use one cost report beginning in each fiscal year to derive the uncompensated care costs for that year, and to annualize Medicaid days and uncompensated care data for hospitals with less than 12 months of data. However, one commenter noted that this proposal may lead to double counting of the uncompensated care costs of acquired hospitals with short cost reporting periods and recommended that CMS modify its methodology to ensure that the data for acquired hospitals is not annualized twice. In addition, for acquired hospitals with more than one cost report beginning in the same Federal fiscal year, the commenter recommended that CMS not automatically select the one with the longer cost reporting period, in order to avoid double-counting. The commenter also recommended that CMS include the report record number in the DSH Supplemental File.

Response: We appreciate the support for our proposal to annualize cost reports that do not equal 12 months of data. We may consider adopting the commenters' recommendations regarding alternatives to the use of the longer cost report in specific situations through future rulemaking if objective and administratively feasible criteria can be developed. However, at present, we continue to believe that our current approach of annualizing the cost report data from the longest cost reporting period during the applicable fiscal year is generally the most accurate and consistent across hospitals. We do not believe it is necessary to include report record numbers in the DSH Supplemental File, as the quarterly HCRIS Public Use Files can be used to reference cost report records

for this additional detail. Accordingly, for the reasons discussed in the proposed rule, and previously in this final rule, we are finalizing the proposal to use the longest cost report beginning in the applicable fiscal year and to annualize Medicaid data and uncompensated care data if a hospital's cost report does not equal 12 months of data.

Comment: A number of commenters supported the proposal to adjust a hospital's uncompensated care costs when those costs are extremely high in relation to its total operating costs for the same year. The commenters noted that this adjustment would help to control for data anomalies. However, one commenter noted that the trim currently uses a 50-percent threshold for the ratio of uncompensated care costs to total operating costs, yet the national average is 6 percent. Another commenter recommended that CMS investigate in cases where a hospital's uncompensated care value is an unrealistically high proportion of total revenue and ask for additional documentation before either allowing the value or requiring a modification. This commenter suggested that CMS could focus on providers at or near trim points initially, then expand to other providers with unlikely values.

Response: We appreciate the support for our proposal to adjust uncompensated care costs that are an extremely high ratio of a hospital's total operating costs for the same year. We believe that the proposed approach balances our desire to exclude potentially aberrant data, with our concern regarding inappropriately reducing FY 2018 uncompensated care payments to a hospital that may have a legitimately high ratio. We are finalizing this adjustment. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20399), we noted that our calculation of Factor 3 for the final rule would be

contingent on the results of the ongoing MAC reviews of hospitals' Worksheet S-10 data, and in the event those reviews necessitate supplemental data edits, we would incorporate such edits in the final rule for the purpose of correcting aberrant data. After the completion of the MAC reviews, we are not incorporating any additional edits to the Worksheet S-10 data that we did not propose in the proposed rule. While, as stated earlier, we acknowledge that the Worksheet S-10 data are not perfect, we need to balance the possibility of potentially improving the accuracy of the Worksheet S-10 data for some hospitals through the creation of additional data edits against the possibility of inadvertently reducing the uncompensated care payments for other hospitals that might fail the edit, but whose data might in fact be accurate. For FY 2019, we have concluded that it is best to err on the side of not inadvertently reducing the uncompensated care payments for hospitals whose data might in fact be accurate.

Comment: Two commenters requested that CMS consider using a proxy for Puerto Rico hospitals' SSI days in computing the empirically justified DSH payment amount, or 25 percent of the amount that would have been paid for Medicare DSH prior to implementation of section 3133 of the Affordable Care Act.

Response: In the FY 2019 IPPS/LTCH PPS proposed rule, we did not propose any changes to the methodology used to calculate empirically justified Medicare DSH payments. Therefore, we consider this comment to be outside the scope of the proposed rule. However, we note that, while section 1886(r)(2)(C)(i) of the Act allows for the use of alternative data as a proxy to determine the costs of subsection (d) hospitals for treating the uninsured for purposes of determining uncompensated care payments, section

1886(r)(1) of the Act requires the Secretary to pay an empirically justified DSH payment that is equal to 25 percent of the amount of the Medicare DSH payment that would otherwise be made under section 1886(d)(5)(F) of the Act to a subsection (d) hospital. Because section 1886(d)(5)(F)(vi) of the Act, which prescribes the disproportionate patient percentage used to determine empirically justified Medicare DSH payments, specifically calls for the use of SSI days in the Medicare fraction and does not allow the use of alternative data, we do not believe there is any legal basis for CMS to use a proxy for Puerto Rico hospitals' SSI days in the calculation of the empirically justified Medicare DSH payment under section 1886(r)(1) of the Act.

Comment: Several commenters supported the proposal to continue to use 14 percent of Medicaid days as a proxy for Medicare SSI days when determining Factor 3 of the uncompensated care payment methodology for Puerto Rico Hospitals. The commenters stated that they appreciated the attention and effort by CMS to develop a fair and appropriate method to estimate SSI days for Puerto Rico, as the SSI program is statutorily unavailable to U.S. citizens residing in the Territories.

One commenter recommended that CMS identify and seek comment on alternate sources of proxy data for Puerto Rico Hospitals for use in future years, such as using data for Medicare beneficiaries with Medicaid eligibility (dual eligible beneficiaries).

Response: We appreciate the support for our proposal to use 14 percent of a Puerto Rico hospital's Medicaid days as a proxy for SSI days. Because we are continuing to use insured low-income patient days as a proxy for uncompensated care in determining Factor 3 for FY 2019, and residents of Puerto Rico are not eligible for SSI

benefits, we believe it is important to create a proxy for SSI days for Puerto Rico hospitals in the Factor 3 calculation. Regarding the recommendation that we consider using inpatient days for Medicare beneficiaries receiving Medicaid as a proxy for uncompensated care in the future, we have examined this concept and have been unable to identify a systematic source for these data for Puerto Rico hospitals. Specifically, we note that inpatient utilization for Medicare beneficiaries who are also entitled to Medicaid is not reported by hospitals on the Medicare cost report, either within or outside Puerto Rico. We expect to further address issues related to estimating the amount of uncompensated care for hospitals in Puerto Rico in future rulemaking.

After consideration of the public comments we received, and for the reasons discussed in the proposed rule and in this final rule, we are finalizing our proposal to use 2 years of Worksheet S-10 data from FY 2014 and FY 2015 cost reports in conjunction with data on low-income insured days that reflects Medicaid days from FY 2013 and SSI days from FY 2016, to calculate Factor 3 for FY 2019.

Therefore, for FY 2019, we are finalizing a policy to compute Factor 3 for each hospital by—

Step 1: Calculating Factor 3 using the low-income insured days proxy based on FY 2013 cost report data and the FY 2016 SSI ratio (or, for Puerto Rico hospitals, 14 percent of the hospital's FY 2013 Medicaid days);

Step 2: Calculating Factor 3 based on the FY 2014 Worksheet S-10 data;

Step 3: Calculating Factor 3 based on the FY 2015 Worksheet S-10 data; and

Step 4: Averaging the Factor 3 values from Steps 1, 2, and 3; that is, adding the Factor 3 values from FY 2013, FY 2014, and FY 2015 for each hospital, and dividing that amount by the number of cost reporting periods with data to compute an average Factor 3 (or for Puerto Rico hospitals, Indian Health Service and Tribal hospitals, and all-inclusive rate providers using the Factor 3 value from Step 1).

We also are finalizing the following proposals: (1) For providers with multiple cost reports beginning in the same fiscal year, to use the longest cost report and annualize Medicaid data and uncompensated care data if a hospital's cost report does not equal 12 months of data; (2) to discontinue the policy of combining cost reports for providers with multiple cost reports beginning during the same fiscal year; (3) where a provider has multiple cost reports beginning in the same fiscal year, but one report also spans the entirety of the following fiscal year such that the hospital has no cost report for that fiscal year, to use the cost report that spans both fiscal years for the latter fiscal year; and (4) to apply statistical trim methodologies to potentially aberrant CCRs and potentially aberrant uncompensated care costs.

For this FY 2019 IPPS/LTCH PPS final rule, we are finalizing a HCRIS cutoff of June 30. This cutoff also applies to revised reports from providers who were contacted by their MAC regarding potentially aberrant uncompensated care costs.

We are also finalizing our proposal to amend the regulations at § 412.106(g)(1)(iii)(C) by adding a new paragraph (5) to reflect the methodology for computing Factor 3 for FY 2019. We note that we are making a technical correction to the uncompensated care definition in proposed paragraph (5) to include nonreimbursable

Medicare bad debt to conform with our proposal in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20398) to define uncompensated care costs as the amount on Worksheet S-10 line 30, which includes charity care and non-Medicare and non-reimbursable Medicare bad debt), and which we are also finalizing in this final rule.

G. Sole Community Hospitals (SCHs) and Medicare-Dependent, Small Rural Hospitals (MDHs) (§§ 412.90, 412.92, and 412.108)

1. Background on SCHs and MDHs

Sections 1886(d)(5)(D) and (d)(5)(G) of the Act provide special payment protections under the IPPS to sole community hospitals (SCHs) and Medicare-dependent, small rural hospitals (MDHs), respectively. Section 1886(d)(5)(D)(iii) of the Act defines an SCH in part as a hospital that the Secretary determines is located more than 35 road miles from another hospital or that, by reason of factors such as isolated location, weather conditions, travel conditions, or absence of other like hospitals (as determined by the Secretary), is the sole source of inpatient hospital services reasonably available to Medicare beneficiaries. The regulations at 42 CFR 412.92 set forth the criteria that a hospital must meet to be classified as a SCH. For more information on SCHs, we refer readers to the FY 2009 IPPS/LTCH PPS final rule (74 FR 43894 through 43897).

Section 1886(d)(5)(G)(iv) of the Act defines an MDH as a hospital that is located in a rural area, or is located in an all-urban State but meets one of the specified statutory criteria for rural reclassification (as added by section 50205 of the Bipartisan Budget Act of 2018, Pub. L. 115-123), has not more than 100 beds, is not an SCH, and has a high percentage of Medicare discharges (that is, not less than 60 percent of its inpatient days or discharges during the cost reporting period beginning in FY 1987 or two of the three most recently audited cost reporting periods for which the Secretary has a settled cost report were attributable to inpatients entitled to benefits under Part A). The regulations at 42 CFR 412.108 set forth the criteria that a hospital must meet to be classified as an

MDH. For additional information on the MDH program and the payment methodology, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51683 through 51684).

## 2. Implementation of Legislation Relating to the MDH Program

### a. Legislative Extension of the MDH Program

Since the extension of the MDH program through FY 2012 provided by section 3124 of the Affordable Care Act, the MDH program has been extended by subsequent legislation. Most recently, section 50205 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted on February 9, 2018, extended the MDH program for FYs 2018 through 2022 (that is, for discharges occurring before October 1, 2022). (Additional information on the extensions of the MDH program after FY 2012 and through FY 2017 can be found in the FY 2016 interim final rule with comment period (80 FR 49596).)

Section 50205 of the Bipartisan Budget Act of 2018 amended sections 1886(d)(5)(G)(i) and 1886(d)(5)(G)(ii)(II) of the Act to provide for an extension of the MDH program for discharges occurring on or after October 1, 2017, through FY 2022 (that is, for discharges occurring on or before September 30, 2022).

We noted in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20401) that, consistent with the previous extensions of the MDH program, generally, a provider that was classified as an MDH as of September 30, 2017, was reinstated as an MDH effective October 1, 2017, with no need to reapply for MDH classification. However, if the MDH had classified as an SCH or cancelled its rural classification under § 412.103(g) effective on or after October 1, 2017, the effective date of MDH status may not be retroactive to

October 1, 2017. We refer readers to the FY 2018 IPPS notice that appeared in the **Federal Register** on April 26, 2018 (CMS-1677-N; 83 FR 18303) for more information on the MDH extension in FY 2018.

b. MDH Classification for Hospitals in All-Urban States

In addition to extending the MDH program, section 50205 amended section 1886(d)(5)(G)(iv) of the Act to include in the definition of an MDH a hospital that is located in a State with no rural area (as defined in paragraph (2)(D)) and satisfies any of the criteria in section 1886(d)(8)(E)(ii)(I), (II), or (III) of the Act, in addition to the other qualifying criteria.

Section 50205 of the Bipartisan Budget Act of 2018 also amended section 1886(d)(5)(G)(iv) of the Act by adding a provision following section 1886(d)(5)(G)(iv)(IV), which specifies that new section 1886(d)(5)(G)(iv)(I)(bb) of the Act applies for purposes of the MDH payment under sections 1886(d)(5)(G)(ii) of the Act (that is, 75 percent of the amount by which the Federal rate is exceeded by the updated hospital-specific rate from certain specified base years) only for discharges of a hospital occurring on or after the effective date of a determination of MDH status made with respect to the hospital after the date of the enactment of this provision. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20401), we noted that, under existing regulations, the effective date for a determination of MDH status is 30 days after the date the MAC provides written notification of MDH status. We also noted that we were proposing in section IV.G.3. of the preamble of the proposed rule to change the effective date for a determination of MDH status. We stated that if the proposal is finalized, the

policy would not be effective until FY 2019 (October 1, 2018) and therefore would not apply to hospitals applying for MDH classification before October 1, 2018. Furthermore, this new provision also specifies that, for purposes of new section 1886(d)(5)(G)(iv)(I)(bb) of the Act, section 1886(d)(8)(E)(ii)(II) of the Act shall be applied by inserting “as of January 1, 2018,” after “such State” each place it appears. Section 50205 of the Bipartisan Budget Act also made conforming amendments to sections 1886(b)(3)(D) (in the language proceeding clause (i)) and 1886(b)(3)(D)(iv) of the Act.

Section 1886(d)(8)(E) of the Act provides for an IPPS hospital that is located in an urban area to be reclassified as a rural hospital if it submits an application in accordance with CMS’ established process and meets certain criteria at section 1886(d)(8)(E)(ii)(I), (II), or (III) of the Act (these statutory criteria are implemented in the regulations at § 412.103(a)(1) through (3)). A subsection (d) hospital that is located in an urban area and meets one of the three criteria under § 412.103(a) can reclassify as rural and is treated as being located in the rural area of the State in which it is located. However, a hospital that is located in an all-urban State is ineligible to reclassify as rural in accordance with the provisions of § 412.103 because the State in which it is located does not have a rural area into which it can reclassify. Prior to the amendments made by the Bipartisan Budget Act, a hospital could only qualify for MDH status if it was either geographically located in a rural area or if it reclassified as rural under the regulations at § 412.103. This precluded hospitals in all-urban States from being classified as MDHs. The newly added provision in the Bipartisan Budget Act of 2018 allows a hospital in an

all-urban State to be eligible for MDH classification if, in addition to meeting the other criteria for MDH eligibility, it satisfies one of the criteria for rural reclassification under section 1886(d)(8)(E)(ii)(I), (II), or (III) of the Act (as of January 1, 2018, where applicable), notwithstanding its location in an all-urban State.

As noted earlier, prior to the enactment of the Bipartisan Budget Act of 2018, a hospital in an all-urban State was ineligible for MDH classification because it could not reclassify as rural. With the new provision added by section 50205 of the Bipartisan Budget Act of 2018, a hospital in an all-urban State can apply and be approved for MDH classification if it can demonstrate that: (1) it meets the criteria at § 412.103(a)(1) or (3) or the criteria at § 412.103(a)(2) as of January 1, 2018, for the sole purposes of qualifying for MDH classification; and (2) it meets the MDH classification criteria at § 412.108(a)(1)(i) through (iii), which, as amended, would be redesignated as § 412.108(a)(1)(i) through (iv). We noted in the proposed rule that for a hospital in an all-urban State to demonstrate that it would have qualified for rural reclassification notwithstanding its location in an all-urban State (as of January 1, 2018, where applicable), it must follow the applicable procedures for rural reclassification and MDH classification at § 412.103(b) and § 412.108(b), respectively. We also noted that we were not proposing any changes to the reclassification criteria under § 412.103 and that a hospital in an all-urban State that qualifies as an MDH under the newly added statutory provision will not be considered as having reclassified as rural but only as having satisfied one of the criteria at section 1886(d)(8)(E)(ii)(I), (II), or (III) of the Act (as of

January 1, 2018, as applicable) for purposes of MDH classification, in accordance with amended section 1886(d)(5)(G)(iv) of the Act.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20402), we proposed to make conforming changes to the regulations at § 412.108(a)(1) and (c)(2)(iii) to reflect the extension of the MDH program for FY 2018 through FY 2022 and the additional MDH classification provision made for hospitals located in all-urban States by section 50205 of the Bipartisan Budget Act of 2018. We proposed a similar conforming change to § 412.90(j) to reflect the extension of the MDH program through FY 2022.

Comment: Commenters supported our proposals to make conforming changes to the regulations to reflect the legislation extending the MDH provision.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are adopting as final the proposed conforming changes to the regulations text at §§ 412.90 and 412.108 to reflect the extension of the MDH program through FY 2022 and the additional MDH classification provision made for hospitals located in all-urban States in accordance with section 50205 of the Bipartisan Budget Act of 2018. We are finalizing the proposed changes in paragraphs (a)(1) and (c)(2)(iii) of § 412.108 and paragraph (j) of § 412.90 without modification.

### 3. Change to SCH and MDH Classification Status Effective Dates

The regulations at 42 CFR 412.92(b)(2)(i) set forth an effective date for SCH classification of 30 days after the date of CMS' written notification of approval. Similarly, § 412.92(b)(2)(iv) specifies that a hospital classified as an SCH receives a

payment adjustment effective with discharges occurring on or after 30 days after the date of CMS' approval of the classification.

Section 401 of the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act (BBRA) of 1999 (Pub. L. 106-113, Appendix F) amended section 1886(d)(8) of the Act to add paragraph (E) which authorizes reclassification of certain urban hospitals as rural if the hospital applies for such status and meets certain criteria. The effective date for rural reclassification status under section 1886(d)(8)(E) of the Act is set forth at 42 CFR 412.103(d)(1) as the filing date, which is the date CMS receives the reclassification application (§ 412.103(b)(5)). One way that an urban hospital can reclassify as rural under § 412.103 (specifically, § 412.103(a)(3)) is if the hospital would qualify as a rural referral center (RRC) as set forth in § 412.96, or as an SCH as set forth in § 412.92, if the hospital were located in a rural area. A geographically urban hospital may simultaneously apply for reclassification as rural under § 412.103(a)(3) by meeting the criteria for SCH status (other than being located in a rural area), and apply to obtain SCH status under § 412.92 based on that acquired rural reclassification. However, the rural reclassification is effective as of the filing date, while the SCH status is effective 30 days after approval. In addition, while § 412.103(c) states that the CMS Regional Office will review the application and notify the hospital of its approval or disapproval of the request within 60 days of the filing date, the regulations do not set a timeframe by which CMS must decide on an SCH request. Therefore, geographically urban hospitals that obtain rural reclassification under § 412.103 for the purposes of obtaining SCH status may face a payment disadvantage because they are paid as rural until the SCH application

is approved and the SCH classification and payment adjustment become effective 30 days after approval.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20402 and 20403), to minimize the lag between the effective date of rural reclassification under § 412.103 and the effective date for SCH status, we proposed to revise § 412.92(b)(2)(i) and (b)(2)(iv) so that the effective date for SCH classification and for the payment adjustment would be the date that CMS receives the complete SCH application, effective for SCH applications received on or after October 1, 2018. However, as discussed in response to comments below, because the MAC receives SCH applications and not CMS, we are clarifying in this final rule that under our policy, as finalized below, the effective date is the date that the MAC receives the complete application. We have revised our finalized regulatory text and this preamble throughout to reflect that the MAC, and not CMS, receives the SCH application. A complete application includes a request and all supporting documentation needed to demonstrate that the hospital meets criteria for SCH status as of the date of application, which includes documentation of rural reclassification in the case of a geographically urban hospital. We stated in the proposed rule that for an application to be complete, all criteria must be met as of the date CMS receives the SCH application, but, similar to above, we are clarifying in this final rule and revising this preamble discussion to reflect that all criteria must be met as of the date the MAC receives the SCH application, because the MAC, and not CMS, receives SCH applications. For example, a hospital applying for SCH status on the basis of a § 412.103 rural reclassification must

submit its § 412.103 application no later than its SCH application in order to be considered rural as of the date the MAC receives the SCH application.

Similar to rural reclassification obtained under § 412.103, we proposed that the effective date for SCH status would be the date that CMS receives the complete application. We also proposed conforming changes to the effective date at § 412.92(b)(2)(ii) for instances when a court order or a determination by the Provider Reimbursement Review Board (PRRB) reverses a CMS denial of SCH status and no further appeal is made. In the interest of a clear and consistent policy, we proposed that this change in the SCH effective date would also apply for hospitals not reclassifying as rural under § 412.103, such as geographically rural hospitals obtaining SCH status. We stated that we believe these proposals to update the regulations at § 412.92 to provide an effective date for SCH status that is consistent with the effective date for rural reclassification under § 412.103 would benefit hospitals by minimizing any payment disadvantage caused by the lag between the effective date of rural reclassification and the effective date of SCH status. We also stated that we believe this proposal to align the SCH effective date with the § 412.103 effective date supports agency efforts to reduce regulatory burden because it would provide for a more uniform policy.

In addition, we proposed to make parallel changes to the effective date for an MDH status determination under § 412.108(b)(4). As discussed earlier, section 50205 of the Bipartisan Budget Act of 2018 extended the MDH program through FY 2022 by amending section 1886(d)(5)(G) of the Act. Similar to the proposed change in effective date for SCH status approvals, we proposed that a determination of MDH status would be

effective as of the date that CMS receives the complete application, for applications received on or after October 1, 2018, rather than the current effective date at § 412.108(b)(4) of 30 days after the date the MAC provides written notification to the hospital. However, as discussed in response to comments below, because the MAC receives MDH applications and not CMS, we are clarifying in this final rule that under our policy, as finalized below, the effective date is the date that the MAC receives the complete application. We have revised our finalized regulatory text and this preamble throughout to reflect that the MAC, and not CMS, receives the MDH application.

Similar to applications for SCH status, a complete application includes a request and all supporting documentation needed to demonstrate that the hospital meets criteria for MDH status as of the date of application. We stated in the proposed rule that for an application to be complete, all criteria must be met as of the date CMS receives the MDH application, but, similar to above, we are clarifying in this final rule and revising our preamble discussion to reflect that all criteria must be met as of the date the MAC receives the SCH application, because the MAC, and not CMS, receives MDH applications. For example, a cost report must be settled at the time of application for a hospital to use that cost report as one of the cost reports required in § 412.108(a)(1)(iii)(C) (redesignated as § 412.108(a)(1)(iv)(C) pursuant to our finalized changes to this regulation, as discussed in the prior section), and a hospital applying for MDH status on the basis of a § 412.103 rural reclassification must submit its § 412.103 application no later than its MDH application in order to be considered rural as of the date the MAC receives the MDH application. (We noted that a hospital in an all-urban

State that applies for MDH status under the expanded definition at section 50205 of the Bipartisan Budget Act of 2018 would need to submit its application for a determination that it meets the criteria at § 412.103(a)(1) or (3) or the criteria at § 412.103(a)(2) as of January 1, 2018 (as discussed in the previous section) no later than its MDH application in order for the application to be considered complete.)

We stated that we believe that concurrently changing the SCH and MDH status effective dates from 30 days after the date of approval to the date the complete application is received would allow for consistency in the regulations governing effective dates of special rural hospital status. In addition, we stated that this proposal would benefit urban hospitals that are requesting § 412.103 rural reclassification at the same time as MDH status because it would synchronize effective dates to eliminate any payment consequences caused by a lag between effective dates for rural reclassification and MDH status.

Comment: Commenters supported this proposal and agreed with CMS that this policy to change the effective dates of SCH and MDH classifications will streamline the process, reduce burden, and align the SCH and MDH status timeline with the rural reclassification process in some cases. The commenters further agreed with CMS that this policy change would benefit hospitals by minimizing the disadvantages associated with a lag between reclassification and SCH or MDH status, and encouraged CMS to finalize this policy as proposed. Other commenters supported the proposal as a positive change expediting the effective date of these classifications but noted that the SCH and MDH regulations at § 412.92(b)(1)(i) and § 412.108(b)(2) require those applications to go

to the MAC, rather than to CMS. The commenters therefore requested clarification regarding the proposed effective date of “the date CMS receives the complete application”.

Response: We appreciate the commenters’ support for our proposal as a positive change that would benefit hospitals by reducing burden and minimizing potential payment disadvantages. The commenters’ observation that the regulations require that SCH and MDH applications be submitted to the MAC, rather than to CMS, is correct and we are making the appropriate changes in the regulation and clarifying our policy in the preamble to this final rule. Specifically, we are finalizing that the effective date of SCH and MDH classification status is the date that the MAC (rather than CMS) receives the complete application.

After consideration of the public comments we received, we are finalizing our proposed changes to § 412.92(b)(2)(i) and (b)(2)(iv), with modification, so that for applications received on or after October 1, 2018, the effective date for SCH classification and for the payment adjustment is the date that the MAC, rather than CMS, receives the complete SCH application. We also are finalizing with modification conforming changes to the effective date at § 412.92(b)(2)(ii) for instances when a court order or a determination by the PRRB reverses a CMS denial of SCH status and no further appeal is made, so that if the hospital’s application for SCH status was received on or after October 1, 2018, the effective date is the date the MAC receives the complete application.

Similarly, we are finalizing our proposed changes to § 412.108(b)(4), with modification, to specify that for applications received on or after October 1, 2018, a determination of MDH status made by the MAC is effective as of the date the MAC receives the complete application.

#### 4. Conforming Technical Changes to Regulations

We note that, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20403), we also proposed to make technical conforming changes to the regulations in § 412.92 and § 412.108 to reflect the change CMS made some time ago to identify fiscal intermediaries as Medicare administrative contractors (MACs).

We did not receive any public comments on the proposed conforming changes to the regulations text at §§ 412.92 and 412.108 to reflect the change CMS made some time ago to identify fiscal intermediaries as MACs. Therefore, in this final rule, we are adopting as final the proposed revisions to § 412.92 and § 412.108 without modification.

H. Hospital Readmissions Reduction Program: Updates and Changes (§§ 412.150 through 412.154)

1. Statutory Basis for the Hospital Readmissions Reduction Program

Section 1886(q) of the Act, as added by section 3025 of the Affordable Care Act, amended by section 10309 of the Affordable Care Act, and further amended by section 15002 of the 21st Century Cures Act, established the Hospital Readmissions Reduction Program. Under the Program, Medicare payments under the acute inpatient prospective payment system for discharges from an applicable hospital, as defined under section 1886(d) of the Act, may be reduced to account for certain excess readmissions. Section 15002 of the 21st Century Cures Act requires the Secretary to compare peer groups of hospitals with respect to the number of their Medicare-Medicaid dual-eligible beneficiaries (dual-eligibles) in determining the extent of excess readmissions. We refer readers to section IV.E.1. of the preamble of the FY 2016 IPPS/LTCH PPS final rule (80 FR 49530 through 49531) and section V.I.1. of the preamble of the FY 2018 IPPS/LTCH PPS final rule (82 FR 38221 through 38240) for a detailed discussion of and additional information on the statutory history of the Hospital Readmissions Reduction Program.

2. Regulatory Background

We refer readers to the following final rules for detailed discussions of the regulatory background and descriptions of the current policies for the Hospital Readmissions Reduction Program:

- FY 2012 IPPS/LTCH PPS final rule (76 FR 51660 through 51676);

- FY 2013 IPPS/LTCH PPS final rule (77 FR 53374 through 53401);
- FY 2014 IPPS/LTCH PPS final rule (78 FR 50649 through 50676);
- FY 2015 IPPS/LTCH PPS final rule (79 FR 50024 through 50048);
- FY 2016 IPPS/LTCH PPS final rule (80 FR 49530 through 49543);
- FY 2017 IPPS/LTCH PPS final rule (81 FR 56973 through 56979); and
- FY 2018 IPPS/LTCH PPS final rule (82 FR 38221 through 38240).

These rules describe the general framework for the implementation of the Hospital Readmissions Reduction Program, including: (1) the selection of measures for the applicable conditions/procedures; (2) the calculation of the excess readmission ratio, which is used, in part, to calculate the payment adjustment factor; (3) beginning in FY 2018, the calculation of the proportion of “dually eligible” Medicare beneficiaries (described below) which is used to stratify hospitals into peer groups and establish the peer group median excess readmission ratios (ERRs); (4) the calculation of the payment adjustment factor, specifically addressing the base operating DRG payment amount, aggregate payments for excess readmissions (including calculating the peer group median ERRs), aggregate payments for all discharges, and the neutrality modifier; (5) the opportunity for hospitals to review and submit corrections using a process similar to what is currently used for posting results on *Hospital Compare*; (6) the adoption of an extraordinary circumstances exception policy to address hospitals that experience a disaster or other extraordinary circumstance; (7) the clarification that the public reporting of excess readmission ratios will be posted on an annual basis to the *Hospital Compare* website as soon as is feasible following the Review and Correction period; and (8) the

specification that the definition of “applicable hospital” does not include hospitals and hospital units excluded from the IPPS, such as LTCHs, cancer hospitals, children’s hospitals, IRFs, IPFs, CAHs, and hospitals in Puerto Rico.

We also have codified certain requirements of the Hospital Readmissions Reduction Program at 42 CFR 412.152 through 412.154.

The Hospital Readmissions Reduction Program strives to put patients first by ensuring they are empowered to make decisions about their own healthcare along with their clinicians, using information from data-driven insights that are increasingly aligned with meaningful quality measures. We support technology that reduces costs and allows clinicians to focus on providing high quality health care for their patients. We also support innovative approaches to improve quality, accessibility, and affordability of care, while paying particular attention to improving clinicians’ and beneficiaries’ experiences when interacting with CMS programs. In combination with other efforts across the Department of Health and Human Services, we believe the Hospital Readmissions Reduction Program incentivizes hospitals to improve health care quality and value, while giving patients the tools and information needed to make the best decisions for them.

We note that we received public comments on the effectiveness and design of the Hospital Readmissions Reduction Program in response to the FY 2019 IPPS/LTCH PPS proposed rule. While we appreciate the commenters’ feedback, because we did not include in the proposed rule any proposals related to these topics, we consider the public comments to be out of the scope of the proposed rule. Therefore, we are not addressing most of these comments in this final rule. All other topics that we consider to be out of

scope of the proposed rule will be taken into consideration when developing policies and program requirements for future years.

Comment: Several commenters requested that CMS study the continued viability of the Hospitals Readmissions Reduction Program. Some commenters believed that certain level of readmissions may be necessary for patient care as defined by medical research on this subject, which means some of the program's measures may have reached the point of diminishing returns. Other commenters expressed concerns about the possibility of unintended patient consequences resulting from the Hospital Readmissions Reduction Program, such as the potential for mortality to increase as readmissions decrease. Some commenters requested that CMS and/or AHRQ undertake a study on any unintended consequences arising from the program.

Response: We believe that the Hospital Readmissions Reduction Program has successfully reduced readmissions which are both harmful to patients and costly for the health care system. Patient well-being is one of our highest priorities, and we welcome any research reports pertaining to the unintended consequences of the program. We are committed to monitoring any unintended consequences over time, such as the inappropriate shifting of care or increased patient morbidity and mortality, to ensure that the Hospital Readmissions Reduction Program improves the lives of patients and reduces cost.

Comment: Some commenters suggested that CMS review the Hospital Readmissions Reduction Program in the context of all quality improvement programs,

determine whether the program is worth retaining, and assess whether the program has achieved its purpose or should give way to a new approach.

Response: As part of the Meaningful Measures Initiative, which we discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20404) and in greater detail below, we have taken a holistic approach to evaluating the appropriateness of the Hospital Readmissions Reduction Program's current measures in the context of the measures used in two other IPPS value-based purchasing programs. The focus of the Hospital Readmissions Reduction Program is on care coordination measures, which address the quality priority of promoting effective communication and care coordination within the Meaningful Measures Initiative. In addition, we will continue to monitor the program to ensure that each program is meeting its intended goals within the larger context of CMS' value-based purchasing programs.

We would like to clarify for the commenters that the Hospital Readmissions Reduction Program is required by statute, and we cannot decline to administer it.

Comment: Several commenters expressed concern that, under the Hospital Readmissions Reduction Program, hospitals can undertake and perform reasonable acts to avoid readmissions, but still be penalized because their performance might remain relatively worse when compared to peer group hospitals' performance.

Response: We understand the commenters' concern. We continue to encourage hospitals to reduce avoidable readmissions through proven care coordination and communications quality improvement tools, such as CMS Quality Improvement and Innovation Network efforts (<https://qioprogram.org/qionews/topics/care-coordination>).

However, we note that the basic readmissions payment adjustment formula for assessing readmissions and penalties under the Hospital Readmissions Reduction Program are specified in the Act, and we are required to implement the statute as written. In particular, the 21<sup>st</sup> Century Cures Act, which amended section 1886(q) of the Act, directs the Hospital Readmissions Reduction Program to develop a transitional methodology based on dual-eligible beneficiaries that allows for separate comparisons for hospitals within peer groups to determine a hospital's payment adjustment factor. It also allows the program to consider other risk-adjustment methodologies, taking into account studies conducted and recommendations made by the Secretary in reports required under section 2(d)(1) of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act), Pub. L. 113-185. We will continue to review our risk-adjustment methodologies and monitor our quality reporting and incentive programs for any unintended and negative consequences, and we will take the commenters' views into account when reviewing Hospital Readmissions Reduction Program data.

### 3. Summary of Policies for the Hospital Readmissions Reduction Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20403 through 20407), we proposed to: (1) establish the applicable period for FY 2019, FY 2020 and FY 2021; (2) codify the previously adopted definition of "dual-eligible"; (3) codify the previously adopted definition of "proportion of dual-eligibles"; and (4) codify the previously adopted definition of "applicable period for dual-eligibility."

These proposals are described in more detail below.

#### 4. Current Measures for FY 2019 and Subsequent Years

The Hospital Readmissions Reduction Program currently includes six applicable conditions/procedures: acute myocardial infarction (AMI); heart failure (HF); pneumonia; total hip arthroplasty/total knee arthroplasty (THA/TKA); chronic obstructive pulmonary disease (COPD); and coronary artery bypass graft (CABG).

By publicly reporting quality data, we strive to prioritize patients by ensuring that they, along with their clinicians, are empowered to make decisions about their own healthcare using information aligned with meaningful quality measures. The Hospital Readmissions Reduction Program, together with the Hospital VBP Program and the HAC Reduction Program, represents a key component of the way that we bring quality measurement, transparency, and improvement together with value-based purchasing to the inpatient care setting. We have undertaken efforts to review the existing measure set in the context of these other programs, to identify how to reduce costs and complexity across programs while continuing to incentivize improvement in the quality and value of care provided to patients. To that end, we have begun reviewing our programs' measures in accordance with the Meaningful Measures Initiative that we described in section I.A.2. of the preambles of the proposed rule (82 FR 20167 through 20168) and this final rule.

As part of this review, we have taken a holistic approach to evaluating the appropriateness of the Hospital Readmissions Reduction Program's current measures in the context of the measures used in two other IPPS value-based purchasing programs (that is, the Hospital VBP Program and the HAC Reduction Program), as well as the Hospital IQR Program. We view the three value-based purchasing programs together as

a collective set of hospital value-based purchasing programs. Specifically, we believe the goals of the three value-based purchasing programs (the Hospital VBP, Hospital Readmissions Reduction, and HAC Reduction Programs) and the measures used in these programs together cover the Meaningful Measures Initiative quality priorities of making care safer, strengthening person and family engagement, promoting coordination of care, promoting effective prevention and treatment, and making care affordable, — but that the programs should not add unnecessary complexity or costs associated with duplicative measures across programs. The Hospital Readmissions Reduction Program focuses on care coordination measures, which address the quality priority of promoting effective communication and care coordination within the Meaningful Measures Initiative. The HAC Reduction Program focuses on patient safety measures, which address the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care.

As part of this holistic quality payment program strategy, we believe the Hospital VBP Program should focus on the measurement priorities not covered by the Hospital Readmissions Reduction Program or the HAC Reduction Program. The Hospital VBP Program would continue to focus on measures related to: (1) the clinical outcomes, such as mortality and complications (which address the Meaningful Measures Initiative quality priority of promoting effective treatment); (2) patient and caregiver experience, as measured using the HCAHPS survey (which addresses the Meaningful Measures Initiative quality priority of strengthening person and family engagement as partners in their care); and (3) healthcare costs, as measured using the Medicare Spending per

Beneficiary measure (which addresses the Meaningful Measures Initiative priority of making care affordable). We believe this framework will allow hospitals and patients to continue to obtain meaningful information about hospital performance and incentivize quality improvement while also streamlining the measure sets to reduce duplicative measures and program complexity so that the costs to hospitals associated with participating in these programs does not outweigh the benefits of improving beneficiary care.

Measures in the Hospital Readmissions Reduction Program are important markers of quality of care, particularly of the care of a patient in transition from an acute care setting to a non-acute care setting. By including these measures in the Program, we seek to encourage hospitals to address the serious problems indicated by the necessity of a hospital readmission and to reduce them and improve care coordination and communication. Therefore, after thoughtful review, we have determined that the six readmission measures in the Hospital Readmissions Reduction Program, which we proposed for removal from the Hospital IQR Program as discussed in in section VIII.A.5.b.(3) of the preambles of the proposed rule and this final rule, are nevertheless appropriately included as part of the Hospital Readmissions Reduction Program.

We continue to believe that the measures that we have adopted adequately address the conditions and procedures specified in the Hospital Readmissions Reduction Program statute. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20404), we did not propose to adopt any new measures.

We note that we received public comments on the program's measures and our holistic approach to the value-based purchasing program and the program's measures. Because we did not propose any measure changes to the program in the FY 2019 IPPS/LTCH PPS proposed rule, we consider these public comments out of the scope of the proposed rule and, therefore, we are not addressing most of them in this final rule. All other topics that we consider to be out of the scope of the proposed rule will be taken into consideration when developing policies and program requirements for future years. However, we address some public comments pertaining to our holistic review of the value-based purchasing programs below.

Comment: Some commenters supported CMS' holistic view of the various hospital value-based purchasing programs and quality reporting programs in an effort to ease provider reporting burden and better focus quality and patient safety efforts. The commenters agree that the reduction of duplicative measures across various programs will help streamline quality measure reporting for hospitals, enhance provider focus on important clinical outcomes, and reduce cost. Other commenters appreciated and encouraged the greater focus on outcome focus rather than process.

Response: We thank the commenters for their support.

Comment: One commenter requested that CMS ensure ample time is provided to the organizations for implementation of new processes such as data collection measures/processes, operations change to align with the Meaningful Measures Initiative, and CMS' holistic approach to the value-based purchasing programs.

Response: We thank the commenter for its comment. As changes occur to implement these initiatives, we will, to the greatest extent possible, work to operationalize our policies in the most seamless way possible. In instances where we expect disruption to stakeholders, we will welcome an ongoing conversation to ensure that providers can continue to focus on patients.

Comment: One commenter opposed removing Hospital Readmissions Reduction Program measures from the Hospital IQR Program because the commenter believed that measures should be initially adopted into the Hospital IQR Program to allow for a period of measure validation, and for health systems to gain familiarity with the measures before they are moved into value-based programs. Other commenters requested that CMS require that any measures newly added to the Hospital Readmissions Reduction Program be publicly reported either in the Hospital IQR Program or within the program without penalty implications for at least 1 year to ensure that hospitals have time to familiarize themselves with the measure and that there are no adverse unintended consequences of the measure use. One commenter urged CMS to not introduce measures with financial impact on providers until after an initial transition period that allows hospitals and CMS to become accustomed to reporting and measuring these items.

Response: We are cognizant of stakeholder concerns and understand the importance of providing hospitals with an opportunity to gain familiarity with a quality measure prior to its implementation in a payment program. We will consider how to best implement new measures in the payment programs before proposing additional measures for the programs, but we do not believe it is appropriate to address how we would adopt

new measures into the program at this time. We note also that we did not propose to add any measures to the Hospital Readmissions Reduction Program in the FY 2019 IPPS/LTCH PPS proposed rule.

We received numerous comments from stakeholders regarding our holistic approach to evaluating the appropriateness of measures previously adopted under the Hospital Readmissions Reduction Program, the Hospital VBP Program, the HAC Reduction Program, and the Hospital IQR Program and our vision for the future of these programs. While program-specific comments and policies are discussed in more detail in each program-specific section of this final rule, we would like to clarify that, in light of our mission to prioritize patients in the provision of services, we are expanding the stated scope of the Hospital VBP Program to include patient safety measures. While we initially sought to delineate measure focus areas between the Hospital VBP Program and the HAC Reduction Program, we agree with commenters that patient safety is a critical component of quality improvement efforts. Therefore, we believe it is appropriate and important to provide incentives under more than one program to ensure that hospitals take every reasonable precaution to avoid adverse patient safety events. In addition, we believe including patient safety measures in both the HAC Reduction Program and the Hospital VBP Program will best promote transparency through publicly reporting hospital performance on these measures, as stakeholders will be able to see both hospitals' performance compared to all other hospitals and hospitals' performance improvement over time. Finally, we note that this approach will also reduce provider burden associated with safety measure data collection and reporting because these

measures are being finalized for removal from the Hospital IQR Program, as discussed in section VIII.A.5.b.(2) of the preamble of this final rule.

Comment: One commenter expressed concern about unintended consequences of making care coordination the sole feature of the Hospital Readmissions Reduction Program and not related measures in an incentive program. This commenter believed that, without the possibility of receiving an incentive payment for performing well, hospitals outside of the penalty portion of the programs would cease trying to improve.

Response: We thank the commenter for its comment. The Hospital Readmissions Reduction Program scores a hospital's performance in relation to its peer institutions' performance. We believe that peer comparison provides appropriate incentives for hospitals to strive for continuous improvement in readmission rates, while also recognizing the impacts of hospital case-mix and other characteristics on a hospital's performance rates.

##### 5. Maintenance of Technical Specifications for Quality Measures

We refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50039) for a discussion of the maintenance of technical specifications for quality measures for the Hospital Readmissions Reduction Program. Technical specifications of the readmission measures are provided on our website in the Measure Methodology Reports at:

<http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Measure-Methodology.html>. Additional resources

about the Hospital Readmissions Reduction Program and measure technical specifications are on the QualityNet website on the Resources page at:

<http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228772412995>.

#### 6. Applicable Periods for FY 2019, FY 2020 and FY 2021

Under section 1886(q)(5)(D) of the Act, the Secretary has the authority to specify the applicable period with respect to a fiscal year under the Hospital Readmissions Reduction Program. In the FY 2012 IPPS/LTCH PPS final rule (76 FR 51671), we finalized our policy to use 3 years of claims data to calculate the readmission measures. In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53675), we codified the definition of “applicable period” in the regulations at 42 CFR 412.152 as the 3-year period from which data are collected in order to calculate excess readmissions ratios and payment adjustment factors for the fiscal year, which includes aggregate payments for excess readmissions and aggregate payments for all discharges used in the calculation of the payment adjustment. The applicable period for dual-eligibles is the same as the applicable period that we otherwise adopt for purposes of the Program.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20405), for FY 2019, consistent with the definition specified at § 412.152, we proposed that the “applicable period” for the Hospital Readmissions Reduction Program would be the 3-year period from July 1, 2014 through June 30, 2017. In other words, we proposed that the proportion of dual-eligibles, excess readmissions ratios and the payment adjustment factors (including aggregate payments for excess readmissions and aggregate payments for all discharges) for FY 2019 would be calculated using data for discharges occurring during the 3-year period of July 1, 2014 through June 30, 2017.

In the FY 2019 IPPS/LTCH PPS proposed rule, for FY 2020, consistent with the definition specified at § 412.152, we proposed that the “applicable period” for the Hospital Readmissions Reduction Program would be the 3-year period from July 1, 2015 through June 30, 2018. As noted earlier, we define the applicable period for dual-eligibles as the applicable period that we otherwise adopted for purposes of the Program; therefore, for FY 2020, the applicable period for dual-eligibles would be the 3-year period from July 1, 2015 through June 30, 2018.

In addition, in the FY 2019 IPPS/LTCH PPS proposed rule, for FY 2021, consistent with the definition specified at § 412.152, we proposed that the “applicable period” for the Hospital Readmissions Reduction Program would be the 3-year period from July 1, 2016 through June 30, 2019. The applicable period for dual-eligibles for FY 2021 would similarly be the 3-year period from July 1, 2016 through June 30, 2019.

Comment: Some commenters supported the applicable periods for FY 2019, FY 2020, and FY 2021 as proposed.

Response: We thank commenters for their support.

Comment: Some commenters expressed concern about the proposed performance period for FY 2019 because it combines data collected under both the ICD–9 and ICD–10 coding sets. Commenters also requested that CMS provide further empirical analysis in the final rule to show that measure reliability and validity are not compromised by using two different coding systems and ensure that the ICD–10 versions of the measures in the Hospital Readmissions Reduction Program are NQF-endorsed as soon as practicable.

Response: As we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38223), the readmission measures in the Hospital Readmissions Reduction Program all completed “maintenance of endorsement,” a periodic evaluation of measures to assess impact and potential unintended consequences, in December 2016 and are NQF-endorsed. The NQF requires developers to submit all ICD– 9 and ICD–10 diagnosis and procedure codes used to define the measure cohorts. We identified all ICD–10 codes that corresponded with ICD–9 codes used in the measure cohort definitions using the General Equivalence Mappings tool (GEMs). The ICD–10 codes identified using GEMs were reviewed by measure and clinical experts and made public as a part of the maintenance of endorsement process. We will submit testing results in claims data coded with ICD–10 in future cycles of NQF endorsement maintenance.

In addition, we have examined changes in risk-standardized readmission rates at the hospital level and the distribution of changes in rates for all claims-based readmission measures, comparing the results of the 2015, 2016, 2017, and 2018 reporting periods. These analyses suggest no more than typical year-to-year variability in hospital-level rates before and after the introduction of ICD-10 codes for most measures. Year-to-year changes between 2015 and 2016, which both contained only ICD-9 claims, are similar to year-to-year changes for the following years, which included a mix of ICD-9 and ICD-10 claims. Risk-standardized readmission rates for 2018 public reporting are similar to those for 2015, 2016, and 2017 public reporting, which also indicates that the results using ICD-9 codes and ICD-10 codes are comparable. Overall, these results suggest that we have successfully created measure specifications in ICD-10 that align with the intent of

the measure, which allows us to compare rates with measures calculated using ICD-9 codes and ICD-10 codes.

We will continue to use a 3-year measurement period rather than a 1-year measurement period, despite the implementation of ICD-10. We use a 3-year measurement period because some small and rural hospitals do not have at least 25 admissions for Medicare FFS patients who are 65 years and older for each of the measure conditions in a single year or even over the course of 2 years. The 3-year period allows us to include the maximum possible number of hospitals in scoring and public reporting.

Comment: One commenter encouraged CMS to include feedback from providers and other stakeholders through previewing model results prior to releasing hospital-specific reports.

Response: We thank commenter for its input. We agree with the need for transparency and providing stakeholders with data to confirm their dual proportion assignment. We also are seeking input from stakeholders and considering different options to provide hospitals with early individualized feedback regarding their peer grouping and payment adjustment.

Comment: One commenter believed that a 1-year performance period is more appropriate than the 3-year period because a 3-year performance period is too long, as some hospitals may demonstrate significant improvement year-over-year and it requires the combination of data from ICD-9 and ICD-10. Another commenter believed the lag time between actual performance and public reporting is troublesome as patients and

hospitals may be relying on stale data. This commenter further recommended the consideration of electronic health records (EHRs) to derive more accurate and timely metrics.

Response: We continue to believe the 3-year period as codified at 42 CFR 412.152 is appropriate. We use a 3-year period of index admissions to increase the number of cases per hospital used for measure calculation, which improves the precision of each hospital's readmission estimate. While this approach utilizes older data, it also identifies more variation in hospital performance and still allows for improvement from one year of reporting to the next. We are maintaining the 3-year period as previously adopted because we continue to believe it balances the needs for the most recent claims and for sufficient time to process the claims data and calculate the measures to meet the program implementation timeline. With respect to EHRs, the Hospital Readmissions Reduction Program relies on claims data; therefore, we question whether EHRs would provide much more timely information.

After consideration of the public comments we received, we are finalizing as proposed, without modification, the applicable period of the 3-year time period of July 1, 2014 through June 30, 2017 for FY 2019; the applicable period of the 3-year time period July 1, 2015 through June 30, 2018 for FY 2020; and the applicable period of the 3-year time period of July 1, 2016 through June 30, 2019 for FY 2021 to calculate readmission payment adjustment factor for FYs 2019, FY 2020, and FY 2021, respectively, under the Hospital Readmissions Reduction Program.

## 7. Identification of Aggregate Payments for Each Condition/Procedure and All Discharges

When calculating the numerator (aggregate payments for excess readmissions), we determine the base operating DRG payment amount for an individual hospital for the applicable period for such condition/procedure, using Medicare inpatient claims from the MedPAR file with discharge dates that are within the applicable period. Under our established methodology, we use the update of the MedPAR file for each Federal fiscal year, which is updated 6 months after the end of each Federal fiscal year within the applicable period, as our data source.

In identifying discharges for the applicable conditions/procedures to calculate the aggregate payments for excess readmissions, we apply the same exclusions to the claims in the MedPAR file as are applied in the measure methodology for each of the applicable conditions/procedures. For the FY 2019 applicable period, this includes the discharge diagnoses for each applicable condition/procedure based on a list of specific ICD-9-CM or ICD-10-CM and ICD-10-PCS code sets, as applicable, for that condition/procedure, because diagnoses and procedure codes for discharges occurring prior to October 1, 2015 were reported under the ICD-9-CM code set, while discharges occurring on or after October 1, 2015 (FY 2016) were reported under the ICD-10-CM and ICD-10-PCS code sets.

We only identify Medicare FFS claims that meet the criteria described above for each applicable condition/procedure to calculate the aggregate payments for excess readmissions (that is, claims paid for under Medicare Part C or Medicare Advantage, are

not included in this calculation). This policy is consistent with the methodology to calculate excess readmissions ratios based solely on admissions and readmissions for Medicare FFS patients. Therefore, consistent with our established methodology, for FY 2019, we proposed to continue to exclude admissions for patients enrolled in Medicare Advantage as identified in the Medicare Enrollment Database.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20405), for FY 2019, we proposed to determine aggregate payments for excess readmissions, aggregate payments for all discharges using data from MedPAR claims with discharge dates that are on or after July 1, 2014, and no later than June 30, 2017. As we stated in FY 2018 IPPS/LTCH PPS final rule (82 FR 38232), we will determine the neutrality modifier using the most recently available full year of MedPAR data. However, we noted that, for the purpose of modeling the proposed FY 2019 readmissions payment adjustment factors for the proposed rule, we used the proportion of dual-eligibles, excess readmissions ratios, and aggregate payments for each condition/procedure and all discharges for applicable hospitals from the FY 2018 Hospital Readmissions Reduction Program applicable period. For the FY 2019 program year, applicable hospitals will have the opportunity to review and correct calculations based on the proposed FY 2019 applicable period of July 1, 2014 to June 30, 2017, before they are made public under our policy regarding reporting of hospital-specific information. Again, we reiterate that this period is intended to review the program calculations, and not the underlying data. For more information on the review and corrections process, we refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53399 through 53401).

In the proposed rule, for FY 2019, we proposed to use MedPAR data from July 1, 2014 through June 30, 2017 for FY 2019 Hospital Readmissions Reduction Program calculations. Specifically, for the final rule, we proposed to use the following MedPAR files--

- March 2015 update of the FY 2014 MedPAR file to identify claims within FY 2014 with discharge dates that are on or after July 1, 2014;
- March 2016 update of the FY 2015 MedPAR file to identify claims within FY 2015;
- March 2017 update of the FY 2016 MedPAR file to identify claims within FY 2016;
- March 2018 update of the FY 2017 MedPAR file to identify claims within FY 2017.

We did not receive any public comments on our proposal to use of the above stated MedPAR files, and therefore are finalizing as proposed, without modification, the use of the above listed MedPAR files to identify claims.

As discussed earlier, the final FY 2019 readmissions payment adjustment factors are not available at this time because hospitals have not yet had the opportunity to review and correct the data (program calculations based on the FY 2019 applicable period of July 1, 2014 to June 30, 2017) before the data are made public under our policy regarding the reporting of hospital-specific data. After hospitals have been given an opportunity to review and correct their calculations for FY 2019, we will post Table 15 (which will be available via the Internet on the CMS website) to display the final FY 2019 readmissions

payment adjustment factors that will be applicable to discharges occurring on or after October 1, 2018. We expect Table 15 will be posted on the CMS website in the fall of 2018.

#### 8. Calculation of Payment Adjustment Factors for FY 2019 and Codification of Certain Definitions

As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38226), section 1886(q)(3)(D) of the Act requires the Secretary to group hospitals and apply a methodology that allows for separate comparisons of hospitals within peer groups in determining a hospital's adjustment factor for payments applied to discharges beginning in FY 2019.

To implement this provision, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38226 through 38237), we finalized several changes to the payment adjustment methodology for FY 2019. First, we finalized that an individual would be counted as a full-benefit dual-eligible patient if the beneficiary was identified as full-benefit dual status in the State Medicare Modernization Act (MMA) files for the month he/she was discharged from the hospital (82 FR 38226 through 38228). Second, we finalized our policy to define the proportion of full benefit dual-eligible beneficiaries as the proportion of dual-eligible patients among all Medicare FFS and Medicare Advantage stays (82 FR 38226 through 38228). Third, we finalized our policy to define the data period for determining dual-eligibility as the 3-year data period corresponding to the Program's applicable period (82 FR 38229). Fourth, we finalized our policy to stratify hospitals into quintiles, or five peer groups, based on their proportion of dual-eligible patients

(82 FR 38229 through 38231). Finally, we finalized our policy to use the median Excess Readmission Ratio (ERR) for the hospital's peer group in place of 1.0 in the payment adjustment formula and apply a uniform modifier to maintain budget neutrality (82 FR 38231 through 38237). The payment adjustment formula would then be:

$$P = 1 - \min\{.03, \sum_{dx} \frac{NM * Payment(dx) * \max\{ERR(dx) - \text{Median peer group ERR}(dx), 0\}}{\text{All payments}}\}$$

where dx is AMI, HF, pneumonia, COPD, THA/TKA or CABG and payments refers to the base operating DRG payments. The payment reduction (1-P) resulting from use of the median ERR for the peer group is scaled by a neutrality modifier (NM) to achieve budget neutrality. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38226 through 38237) for a detailed discussion of the changes to the payment adjustment methodology, including alternatives considered, for FY 2019. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20406), we did not propose any changes to the methodology for FY 2019 or subsequent years. However, we proposed to codify our previously finalized definitions of “applicable period for dual-eligibility”, “dual-eligible”, and “proportion of dual-eligibles” at 42 CFR 412.152. The definitions which we proposed to codify are as follows:

- “Applicable period for dual-eligibility” is the 3-year data period corresponding to the applicable period as established by the Secretary for the Hospital Readmissions Reduction Program.

- “Dual-eligible” is a patient beneficiary who has been identified as having full benefit status in both the Medicare and Medicaid programs in the State MMA files for the month the beneficiary was discharged from the hospital.

- “Proportion of dual-eligibles” is the number of dual-eligible patients among all Medicare FFS and Medicare Advantage stays during the applicable period.

Comment: One commenter supported the proposal to codify the previously finalized definitions of applicable period for dual-eligibility, dual-eligible, and proportion of dual-eligibles. Several commenters supported the codification of previously adopted definitions for dual-eligibles to better assess disparate outcomes across patient populations at a given hospital.

Response: We thank commenters for their support.

Comment: Some commenters opposed the use of Medicare Advantage (MA) patients in the proportion of dual-eligibles definition and stated that CMS should base the peer group only on the share of FFS patients that are fully dual eligible, not on the share of all (FFS and MA) patients because the penalty does not apply to readmissions of MA patients. The commenters asserted that their risk characteristics could distort the risk profiles of hospitals because the income characteristics of FFS and MA patients may differ for particular hospitals. Other commenters opposed the use of dual-eligible as the basis for determining socioeconomic status because it does not necessarily reflect demographic or economic factors and conditions where the hospital is located or the patient resides.

Response: We would like to clarify that we did not propose any changes to the definition of dual-eligible; we merely proposed to codify it. As we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38221), we finalized using FFS and MA patients because calculating the dual proportion among all Medicare FFS and managed care patients more accurately represents the dual status of the hospital, particularly for hospitals in States with high managed care penetration rates. This approach enables more accurate and complete risk profiles for hospitals. There is a strong relationship between dual proportion and penalties under both the current methodology and proposed approaches, whether hospitals are stratified based on Medicare FFS patients only or based on both Medicare FFS and managed care patients. In general, this relationship is similarly positive; hospitals with higher dual proportions by either definition incur larger penalties, on average. However, the relationship between the penalty share of payments and dual proportion among FFS and managed care patients exhibits a slightly stronger upward trend. We refer readers to FY 2018 IPPS/LTCH PPS final rule (82 FR 38228 through 38229) for more information. Further, the statute directs the Secretary to use dual-eligibles to assign the peer groups during this transitional phase of risk-adjustment.

We did not propose changes with respect to our previously finalized proposals. However, commenters provided many suggestions on the Hospital Readmissions Reduction Program's risk-adjustment methodology. While we appreciate the commenters' feedback, we consider these topics to be out of the scope of the proposed rule. Therefore, we are not addressing most of them in this final rule. However, because there is stakeholder interest in this topic, we have included summaries of some of these

comments with responses below. All other topics that we consider to be out of the scope of the proposed rule, even if not addressed below, will be taken into consideration when developing policies and program requirements for future years.

Comment: Some commenters supported the previously adopted payment adjustment methodology for FY 2019, which implemented the transitional methodology required by the 21st Century Cures Act. Commenters supported appropriate risk-adjustment methodology for the Hospital Readmissions Reduction Program. Commenters also supported organizing hospitals into peer groups and evaluating their performance in comparison to similar hospitals.

Response: We thank the commenters for their support.

Comment: Some commenters supported accounting for social risk factors in quality programs through peer grouping.

Response: We thank the commenters for their support.

Comment: One commenter recommended that, instead of peer groups, CMS find ways to direct additional resources to hospitals that serve the most disadvantaged populations to achieve health equity.

Response: We do not believe there is a provision in the statute that authorizes the Program to provide direct resources to hospitals. However, subparagraphs (D) and (E) to section 1886(q)(3) of the Act direct the Secretary to assign hospitals to peer groups, develop a methodology that allows for separate comparisons for hospitals within these groups, and allows for changes in the risk adjustment methodology. Following this transitional methodology, the Secretary is allowed to consider the recommendations in

the reports required by the IMPACT Act related to risk adjustment and social risk factors to determine improved risk adjustment, but is not authorized to provide direct support to hospitals. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38221 through 38222) for more information. We also note that many programs throughout HHS, run by CMS and other agencies, provide funding and support for “safety net hospitals.”

Comment: Some commenters questioned whether five peer groups were the appropriate number of peer groups and whether there should be more peer groups. One commenter reiterated its recommendations to use statistical analysis to create what it posits as a more natural distribution of provider performance than quintiles. Another commenter provided a different statistical approach to determine hospital groupings. Commenters urged CMS to continuously evaluate this peer groupings to avoid unintended consequences.

Response: We would like to clarify that we did not propose any changes to the policy for five peer groups. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38229 through 38231), we finalized stratifying hospitals into quintiles (five peer groups) because that policy creates peer groups that accurately reflect the relationship between the proportion of dual-eligible patients in the hospital’s population without the disadvantage of establishing a larger number of peer groups. We continue to believe preselecting peer groups of equal size and choosing the size that best meets these objectives is transparent and effective. In the future, more flexible methods for peer group formation may be considered for implementation. Any approach must be

evaluated based on multiple criteria, including those described above and proposed through the rulemaking process.

Comment: Some commenters supported assignment of hospitals to peer groups (quintiles) as a first step of accounting for social risk factors, but encouraged CMS to continue to work with stakeholders to develop appropriate risk-adjustment methodologies. Commenters believed that stratifying performance by the hospital's number of dual-eligible patients is only a temporary solution, and recommended that CMS take steps to ensure that individual measures account for socio-demographic status (SDS) in the measure level risk adjustment model. Commenters asked CMS to consider whether it should continue to use dual-eligibility as an adjustment variable and whether it should move from the current peer grouping approach to one that incorporates one or more socioeconomic variables into the risk-adjustment model of Hospital Readmissions Reduction Program measures. Commenters supported CMS' efforts to adjust for socioeconomic factors. However, these commenters urged continued refinements to stay current with evolving measurement science around accounting for social risk factors.

Response: As required by the 21<sup>st</sup> Century Cures Act, we are stratifying hospitals based on dual-eligible proportion and modifying the payment adjustment factor formula to assess a hospital's performance relative to other hospitals in its peer group. This approach is transparent. We believe this approach achieves both the goal of holding all hospitals to a high standard while also ensuring we are not disproportionately penalizing hospitals serving an at-risk population. Section 1886(q)(3)(E)(i) of the Act allows the Secretary to consider studies conducted and recommendations made by the Secretary

under section 2(d)(1) of the IMPACT Act in the application of risk adjustment methodologies. We will continue to monitor the progress and findings of research the Assistant Secretary for Planning and Evaluation (ASPE) is conducting as part of its IMPACT Act study and the National Quality Forum's trial period and will consider their recommendations. We also will continue to monitor the impact of accounting for dual-eligible patients in the Hospital Readmissions Reduction Program and evaluate whether future changes to include other variables or adjustments are needed. For more information, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38221 through 38222).

Comment: Some commenters believed that peer grouping by dual-eligibility has limitations or flaws as a risk-adjustment method, and urged CMS to consider whether it should continue to use dual-eligibility as the adjustment variable and whether to move from the current peer grouping approach to one in which it incorporates one or more socioeconomic variables into the risk adjustment models of the Hospital Readmissions Reduction Program measures (that is, direct risk adjustment). Commenters encouraged CMS to review the evolving measurement science continually and consider NQF and National Academy of Medicine concepts as it considers best ways to risk-adjust quality measures for social factors. Other commenters urged CMS to include factors related to a patient's background—including SDS, language, and post-discharge support structure—in measure development and risk-adjustment methodology. Still other commenters recommended that CMS use census data, distressed community index, or location information to determine socioeconomic adjustment.

Response: We will continue to monitor the impact of accounting for dual-eligible patients in the Hospital Readmissions Reduction Program and evaluate whether future changes to include other variables or adjustments are needed. As we have previously noted, the Hospital Readmissions Reduction Program is required by section 1886(q)(3)(D) of the Act to use dual-eligible beneficiaries for hospital's adjustment factor beginning in FY 2019, and until the application of section 1886(q)(3)(E)(i) of the Act, at which point the Secretary may consider other risk-adjustment methodologies, taking into account the reports mandated by the IMPACT Act. The second and final report is scheduled for release in October 2019. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38221 through 38222) for more information.

Comment: One commenter urged CMS to not use social risk factors to adjust quality measures for transparency and payment.

Response: We thank the commenter for its comment. However, we note Congress mandated that the Hospital Readmissions Reduction Program account for social risk factors when it added subparagraphs (D) and (E) to section 1886(q)(3) of the Act directing the Secretary to assign hospitals to peer groups, develop a methodology that allows for separate comparisons for hospitals within these groups, and allows for changes in the risk adjustment methodology. As we have noted previously, the goal of risk adjustment is to account for factors that are inherent to the patient at the time of admission, such as severity of disease to put hospitals on a level playing field. The measures should not be risk-adjusted to account for differences in practice patterns that

lead to lower or higher risk for patients to be readmitted. The measures aim to reveal differences related to the patterns of care.

After consideration of the public comments we received, we are finalizing as proposed, without modification, our decision to codify the definitions of “applicable period for dual-eligibility”; “dual-eligible”; and “proportion of dual-eligibles” as stated above at 42 CFR 412.152.

#### 9. Calculation of Payment Adjustment for FY 2019

Section 1886(q)(3)(A) of the Act defines the payment adjustment factor for an applicable hospital for a fiscal year as equal to the greater of: (i) the ratio described in subparagraph (B) for the hospital for the applicable period (as defined in paragraph (5)(D)) for such fiscal year; or (ii) the floor adjustment factor specified in subparagraph (C). Section 1886(q)(3)(B) of the Act, in turn, describes the ratio used to calculate the adjustment factor. Specifically, it states that the ratio is equal to 1 minus the ratio of – (i) the aggregate payments for excess readmissions, and (ii) the aggregate payments for all discharges, scaled by the neutrality modifier. The calculation of this ratio is codified at § 412.154(c)(1) of the regulations and the floor adjustment factor is codified at § 412.154(c)(2) of the regulations. Section 1886(q)(3)(C) of the Act specifies the floor adjustment factor at 0.97 for FY 2015 and subsequent fiscal years.

Consistent with section 1886(q)(3) of the Act, codified in our regulations at § 412.154(c)(2), for FY 2019, the payment adjustment factor will be either the greater of the ratio or the floor adjustment factor of 0.97. Under our established policy, the ratio is rounded to the fourth decimal place. In other words, for FY 2019, a hospital subject to

the Hospital Readmissions Reduction Program would have an adjustment factor that is between 1.0 (no reduction) and 0.9700 (greatest possible reduction).

Comment: One commenter supported budget neutral adjustment approach directed by the 21<sup>st</sup> Century Cures Act.

Response: We thank the commenter for its support.

Comment: Another commenter addressed what it believed is a methodological flaw in the statutory design of the penalty calculation. However, this commenter agreed that only Congress has the authority to amend the statute to correct the calculations.

Response: We thank the commenter for the feedback. As the commenter noted, we are bound by the statute's direction.

After consideration of the public comments we received, we are finalizing as proposed, without modification, the calculation of payment adjustment for FY 2019.

#### 10. Accounting for Social Risk Factors in the Hospital Readmissions Reduction Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20406 through 20407), we discussed accounting for social risk factors in the Hospital Readmissions Reduction Program.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38237 through 38239), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a

disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>230</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social risk factors in CMS value-based purchasing programs.<sup>231</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404), ASPE’s report to Congress found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38237), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>232</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that “measures with a conceptual basis for adjustment generally did not demonstrate an empirical

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230 See, for example United States Department of Health and Human Services. “Healthy People 2020: Disparities. 2014.” Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

231 Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs.” December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicares-value-based-purchasing-programs>.

232 Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

relationship” between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has extended the socioeconomic status (SES) trial,<sup>233</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018 and CY 2018 proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a hospital or provider that would also allow for a comparison of those differences, or disparities, across providers. Feedback we received across our quality reporting programs included encouraging CMS to explore whether factors could be used to stratify or risk adjust the measures (beyond dual eligibility); considering the full range of differences in patient backgrounds that might affect outcomes; exploring risk adjustment approaches; and offering careful consideration of what type of information display would be most useful to the public.

We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care.

Commenters encouraged us to stratify measures by other social risk factors such as age,

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233 Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

income, and educational attainment. With regard to value-based purchasing programs, commenters also cautioned to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to more medically complex patients. Commenters also noted that value-based payment program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

As a next step, CMS is considering options to improve health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We also are considering how this work applies to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for more details, where we discuss the potential stratification of certain Hospital IQR Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

While we did not specifically request public comment on social risk factors in the FY 2019 IPPS/LTCH PPS proposed rule, we received a number of comments with respect to social risk factors. We thank commenters for sharing their views and their willingness to support the efforts of CMS and NQF on this important issue. We will take this feedback into account as we continue to review social risk factors on an ongoing and

continuous basis. In addition, we both welcome and appreciate stakeholder feedback as we continue our work on these issues.

## I. Hospital Value-Based Purchasing (VBP) Program: Policy Changes

### 1. Background

#### a. Statutory Background and Overview of Past Program Years

Section 1886(o) of the Act, as added by section 3001(a)(1) of the Affordable Care Act, requires the Secretary to establish a hospital value-based purchasing program (the Hospital VBP Program) under which value-based incentive payments are made in a fiscal year (FY) to hospitals that meet performance standards established for a performance period for such fiscal year. Both the performance standards and the performance period for a fiscal year are to be established by the Secretary.

For more of the statutory background and descriptions of our current policies for the Hospital VBP Program, we refer readers to the Hospital Inpatient VBP Program final rule (76 FR 26490 through 26547); the FY 2012 IPPS/LTCH PPS final rule (76 FR 51653 through 51660); the CY 2012 OPPS/ASC final rule with comment period (76 FR 74527 through 74547); the FY 2013 IPPS/LTCH PPS final rule (77 FR 53567 through 53614); the FY 2014 IPPS/LTCH PPS final rule (78 FR 50676 through 50707); the CY 2014 OPPS/ASC final rule (78 FR 75120 through 75121); the FY 2015 IPPS/LTCH PPS final rule (79 FR 50048 through 50087); the FY 2016 IPPS/LTCH PPS final rule (80 FR 49544 through 49570); the FY 2017 IPPS/LTCH PPS final rule (81 FR 56979 through 57011); the CY 2017 OPPS/ASC final rule with comment period (81 FR 79855 through 79862); and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38240 through 38269).

We also have codified certain requirements for the Hospital VBP Program at 42 CFR 412.160 through 412.167.

b. FY 2019 Program Year Payment Details

Section 1886(o)(7)(B) of the Act instructs the Secretary to reduce the base operating DRG payment amount for a hospital for each discharge in a fiscal year by an applicable percent. Under section 1886(o)(7)(A) of the Act, the sum total of these reductions in a fiscal year must equal the total amount available for value-based incentive payments for all eligible hospitals for the fiscal year, as estimated by the Secretary. We finalized details on how we would implement these provisions in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53571 through 53573), and we refer readers to that rule for further details.

Under section 1886(o)(7)(C)(iv) of the Act, the applicable percent for the FY 2019 program year is 2.00 percent. Using the methodology we adopted in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53571 through 53573), we estimate that the total amount available for value-based incentive payments for FY 2019 is approximately \$1.9 billion, based on the March 2018 update of the FY 2017 MedPAR file.

As finalized in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53573 through 53576), we will utilize a linear exchange function to translate this estimated amount available into a value-based incentive payment percentage for each hospital, based on its Total Performance Score (TPS). We will then calculate a value-based incentive payment adjustment factor that will be applied to the base operating DRG payment amount for each discharge occurring in FY 2019, on a per-claim basis. We published proxy

value-based incentive payment adjustment factors in Table 16 associated with the FY 2019 IPPS/LTCH PPS proposed rule (which is available via the Internet on the CMS website). We are publishing updated proxy value-based incentive payment adjustment factors in Table 16A associated with this final rule (which is available via the Internet on the CMS website). The proxy factors are based on the TPS from the FY 2018 program year. These FY 2018 performance scores are the most recently available performance scores hospitals have been given the opportunity to review and correct. The updated slope of the linear exchange function used to calculate the proxy value-based incentive payment adjustment factors in Table 16A is 2.8887004713. This slope, along with the estimated amount available for value-based incentive payments, has been updated based on the March 2018 update to the FY 2017 MedPAR file and is also published in Table 16A (which is available via the Internet on the CMS website).

After hospitals have been given an opportunity to review and correct their actual TPSs for FY 2019, we will post Table 16B (which will be available via the Internet on the CMS website) to display the actual value-based incentive payment adjustment factors, exchange function slope, and estimated amount available for the FY 2019 program year. We expect Table 16B will be posted on the CMS website in the fall of 2018.

## 2. Retention and Removal of Quality Measures

### a. Retention of Previously Adopted Hospital VBP Program Measures and Clarification of the Relationship Between the Hospital IQR and Hospital VBP Program Measure Sets

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53592), we finalized a policy to retain measures from prior program years for each successive program year, unless

otherwise proposed and finalized. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20408), we did not propose any changes to this policy.

In the FY 2019 IPPS/LTCH/PPS proposed rule (83 FR 20408), we proposed to revise our regulations at 42 CFR 412.164(a) to clarify that once we have complied with the statutory prerequisites for adopting a measure for the Hospital VBP Program (that is, we have selected the measure from the Hospital IQR Program measure set and included data on that measure on *Hospital Compare* for at least one year prior to its inclusion in a Hospital VBP Program performance period), the Hospital VBP statute does not require that the measure continue to remain in the Hospital IQR Program. We stated that the proposed revision to the regulation text would clarify that Hospital VBP Program measures will be selected from the measures specified under the Hospital IQR Program, but the Hospital VBP Program measure set will not necessarily be a subset of the Hospital IQR Program measure set. As discussed in section I.A.2. of the preamble of this final rule, we are engaging in efforts aimed at evaluating and streamlining regulations with the goal to reduce unnecessary costs, increase efficiencies, and improve beneficiary experience. In the FY 2019 IPPS/LTCH PPS proposed rule, we stated that this proposal would reduce costs, such as those discussed in section IV.I.2.b. of the preamble of the proposed rule, by allowing us to remove duplicative measures from the Hospital IQR Program that are retained in the Hospital VBP Program.

Comment: A number of commenters supported CMS' proposal to revise its regulations to clarify that once CMS has complied with the statutory prerequisites for the Hospital VBP Program, the Hospital VBP Program statute does not require that a

measure continue to remain in the Hospital IQR Program. These commenters agreed that clarifying these statutory requirements would reduce the complexity and costs associated with maintaining duplicative measures across CMS quality programs. One commenter also expressed its belief that this clarification would allow for more focused quality improvement efforts by hospitals and result in streamlined public reporting, which would be easier for the public to understand.

Response: We thank the commenters for their support.

Comment: Some commenters did not support CMS' proposal to clarify the Hospital VBP Program's regulations. These commenters expressed their belief that CMS lacks the statutory authority to remove a measure from the Hospital IQR Program that is being used in the Hospital VBP Program, and further asserted that removing such a measure would undermine the statutory requirements that created and preserve the Hospital IQR Program. Other commenters stated that initially adopting measures into the Hospital IQR Program allows for a period of measure validation and for health systems to gain familiarity with the measures before they are moved into value-based purchasing programs, and expressed concern CMS' "holistic" view would allow new measures to be adopted immediately into the value-based purchasing programs without this time for familiarization and validation. These commenters stated their belief that adopting measures directly into the value-based purchasing programs would result in significant harm, undue hardship, and potentially financial penalties on healthcare systems.

Other commenters expressed confusion regarding the proposed revisions to the Hospital VBP Program's regulatory text, and requested clarification about whether

measures would continue to be adopted in the Hospital IQR Program and publicly reported on *Hospital Compare* for one year prior to adoption in the Hospital VBP Program.

Response: We thank the commenters for their comments, but emphasize that our proposal to revise the Hospital VBP Program regulations at 42 CFR 412.164(a) does not affect the underlying statutory requirements of the Hospital VBP or Hospital IQR Programs. As required under sections 1886(o)(2)(A) and 1886(o)(2)(C)(i) of the Act, we will continue to select measures for the Hospital VBP Program that have been specified for the Hospital IQR Program and refrain from beginning the performance period for any new measure until the data on that measure have been posted on *Hospital Compare* for at least one year. We note the statute does not require a measure that has met these statutory requirements to remain in the Hospital IQR Program at the same time as the Hospital VBP Program. The proposed revisions to the regulatory text only clarify that after a measure has met the above requirements and been adopted into the Hospital VBP Program measure set, it can be removed from the Hospital IQR Program measure set. We, therefore, disagree that this revision could result in harm, undue hardship, or financial penalties to hospitals because it does not alter the processes associated with adopting a new measure into the Hospital VBP Program.

We also disagree that removing measures from the Hospital IQR Program after adoption by the Hospital VBP Program undermines the Hospital IQR Program's statutory requirements or purpose. The Hospital IQR Program will continue to serve as the primary quality reporting program for the inpatient hospital setting of care, and its

authority to collect and report data is unaffected by this revision to the Hospital VBP Program's regulatory text. We believe removing certain measures from the Hospital IQR Program that have transitioned to the Hospital VBP Program will better enable the Hospital IQR Program to consider new quality measures and collect and publicly report these data for both patients and providers without imposing an unduly high burden on providers.

Comment: A number of commenters did not support CMS' proposal to clarify the Hospital VBP Program's regulations due to concerns this clarification would reduce transparency in public reporting. Some commenters noted that the Hospital IQR Program publicly reports measure performance data but the Hospital VBP Program only reports program-specific performance scores for its measures and domains, which are not meaningful to consumers and are only indirectly tied to actual data. These commenters, therefore, expressed concern that the Hospital VBP Program's current public reporting is an insufficient substitute for the Hospital IQR Program's measure-specific reporting. A few commenters also noted that the Hospital IQR Program and *Hospital Compare* have a carefully outlined process for reviewing measure data with hospitals before releasing that data to the public, and expressed their belief that measures must be in the Hospital IQR Program in order to undergo this process. One commenter observed that the Hospital VBP Program is built around the Hospital IQR Program reporting infrastructure to establish a progression of measures to promote higher quality of care, and should be maintained as such. A number of commenters requested CMS ensure that measure-level results continue to be reported on *Hospital Compare* for all measures in the Hospital VBP

program to ensure that there is no loss of information to the public. One commenter further requested that CMS consider the impact of measure removals from the Hospital IQR Program for hospitals that do not participate in the Hospital VBP Program and the potential effect on public reporting of data for these hospitals.

Response: We thank commenters for sharing their concerns, and clarify that we will continue to report measure-level data for all of CMS' quality programs in a manner that is transparent and easily understood by patients. We note that section 1886(o)(10)(A) of the Act requires the Hospital VBP Program to make information available to the public regarding the performance of individual hospitals, including performance with respect to each measure, on the *Hospital Compare* website in an easily understandable format. We currently publicly report hospital-specific measure-level information from the Hospital VBP Program along with program-specific scores, and we will continue to solicit input from and share updates with stakeholders as we move forward with plans to publicly report Hospital VBP Program data in order to ensure the publicly reported information is sufficiently streamlined to avoid confusion while also providing the information necessary to assist patients in making decisions about their care. We therefore clarify that we will continue to publicly report the quality measure data for those measures removed from the Hospital IQR Program but kept in the Hospital VBP program on the *Hospital Compare* website in a manner similar to the way the data have previously been reported under the Hospital IQR Program. We will also take commenters' concerns regarding public reporting of data for hospitals not included or not

participating in the Hospital VBP Program into account as we continue to assess public reporting options.

After consideration of the public comments we received, we are finalizing the proposed revisions to our regulations at 42 CFR 412.164(a).

b. Measure Removal Factors for the Hospital VBP Program

As discussed earlier, we have adopted a policy to generally retain measures from prior year's Hospital VBP Program for subsequent years' measure sets unless otherwise proposed and finalized. We have previously removed measures from the Hospital VBP Program for reasons such as being topped out (80 FR 49550), the measure does not align with current clinical guidelines or practices (78 FR 50680 through 50681), a more applicable measure was available (82 FR 38242 through 38244), there was insufficient evidence that the measure leads to better outcomes (78 FR 50680 through 50681), another measure was more closely linked to better outcomes (77 FR 53582 through 53584, and 53592), the measure led to unintended consequences (82 FR 38242 through 38244), and impossibility of calculating a score (82 FR 38242 through 38244).

The reasons we cited above to support the removal of measures from the Hospital VBP Program generally align with measure removal factors that have been adopted by the Hospital IQR Program. We believe that these factors are also applicable in evaluating Hospital VBP Program quality measures for removal, and that their adoption in the Hospital VBP Program will help ensure consistency in our measure evaluation methodology across our programs. Accordingly, in the FY 2019 IPPS/LTCH/PPS proposed rule (83 FR 20408 through 20409), we proposed to adopt the Hospital IQR

Program measure removal factors that we finalized in the FY 2011 IPPS/LTCH PPS final rule (75 FR 50185) and further refined in the FY 2015 IPPS/LTCH PPS and FY 2016 IPPS/LTCH PPS final rules (79 FR 50203 through 50204 and 80 FR 49641 through 49643, respectively) for use in determining whether to remove Hospital VBP Program measures:

- Factor 1. Measure performance among hospitals is so high and unvarying that meaningful distinctions and improvements in performance can no longer be made (“topped out” measures), defined as: statistically indistinguishable performance at the 75<sup>th</sup> and 90<sup>th</sup> percentiles; and truncated coefficient of variation  $\leq 0.10$ ;<sup>234</sup>
- Factor 2. A measure does not align with current clinical guidelines or practice;
- Factor 3. The availability of a more broadly applicable measure (across settings or populations), or the availability of a measure that is more proximal in time to desired patient outcomes for the particular topic;
- Factor 4. Performance or improvement on a measure does not result in better patient outcomes;
- Factor 5. The availability of a measure that is more strongly associated with desired patient outcomes for the particular topic;
- Factor 6. Collection or public reporting of a measure leads to negative unintended consequences other than patient harm; and
- Factor 7. It is not feasible to implement the measure specifications.

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<sup>234</sup> We previously adopted the two criteria for determining the “topped-out” status of Hospital VBP Program measures in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50055).

We noted that these removal factors would be considerations taken into account when deciding whether or not to remove measures, not firm requirements. We continue to believe that there may be circumstances in which a measure that meets one or more factors for removal should be retained regardless, because the drawbacks of removing a measure could be outweighed by other benefits to retaining the measure.

Also, in alignment with proposals that were made for other quality reporting and value-based purchasing programs, we proposed to adopt the following additional factor to consider when evaluating measures for removal from the Hospital VBP Program measure set: Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

As we discuss in section I.A.2. of the preamble of the proposed rule with respect to our new Meaningful Measures Initiative and in this final rule, we are engaging in efforts to ensure that the Hospital VBP Program measure set continues to promote improved health outcomes for beneficiaries while minimizing the overall costs associated with the program. We believe these costs are multifaceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the program. We have identified several different types of costs, including, but not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submission/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative

measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other federal and/or state regulations (if applicable). For example, it may be needlessly costly and/or of limited benefit to retain or maintain a measure which our analyses show no longer meaningfully supports program objectives (for example, informing beneficiary choice or payment scoring). It may also be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. CMS may also have to expend unnecessary resources to maintain the specifications for the measure, as well as the tools needed to collect, validate, analyze, and publicly report the measure data. Furthermore, beneficiaries may find it confusing to see public reporting on the same measure in different programs.

When these costs outweigh the evidence supporting the continued use of a measure in the Hospital VBP Program, we believe it may be appropriate to remove the measure from the program. Although we recognize that one of the main goals of the Hospital VBP Program is to improve beneficiary outcomes by incentivizing health care providers to focus on specific care issues and making public data related to those issues, we also recognize that those goals can have limited utility where, for example, the publicly reported data (including percentage payment adjustment data) are of limited use because they cannot be easily interpreted by beneficiaries to influence their choice of providers. In these cases, removing the measure from the Hospital VBP Program may

better accommodate the costs of program administration and compliance without sacrificing improved health outcomes and beneficiary choice.

We proposed that we would remove measures based on this factor on a case-by-case basis. We might, for example, decide to retain a measure that is burdensome for health care providers to report if we conclude that the benefit to beneficiaries justifies the reporting burden. Our goal is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients.

Comment: Several commenters supported the adoption of the seven measure removal factors previously adopted by the Hospital IQR Program into the Hospital VBP Program. A few commenters stated that adoption of these factors would allow for consistency in measure evaluation methodology across programs. One commenter believed that the factors are well-established and ensure that a variety of valid reasons to remove a measure are considered by CMS. Another commenter agreed the seven measure removal factors improve the usefulness of accepted quality measures included in the Hospital VBP Program (that is, they make them align with clinical practice, relate to good patient outcomes, do not lead to unintended adverse consequences, are feasible, and have room for improvement) and uphold the purpose behind the program to improve patient care and reduce Medicare costs. A third commenter expressed appreciation that these factors are guidelines and not firm requirements.

Response: We thank commenters for their support.

Comment: One commenter did not support adoption of measure removal Factor 1, “measure performance among hospitals is so high and unvarying that meaningful distinctions and improvement in performance can no longer be made (“topped out” measures)” because the commenter believed removal of a measure immediately upon a “topped out” analysis would eliminate the ability to determine whether performance regresses or that the removal of the measure may result in lower quality of care over the long term. The commenter recommended CMS either consolidate measures that meet the “topped out” criteria but are still considered meaningful to stakeholders into a composite measure or include them as an evidence-based standard in a verification program. The commenter further recommended that CMS ask measure stewards for different data sources which may demonstrate a gap in performance, as well as assess whether a measure is topped-out across all provider types and all sub-groups of patients to identify any potential gaps before proposing to remove the measure.

Response: We thank commenter for its recommendations. As we discussed in the proposed rule, the removal factors are intended to be considerations taken into account when deciding whether or not to remove measures, but are not firm requirements. There may be circumstances in which a measure that meets one or more factors for removal should be retained regardless, because the drawbacks of removing a measure could be outweighed by other benefits to retaining the measure. We intend to take multiple considerations into account when determining whether to propose a measure for removal under Factor 1 or any of the other removal factors.

Comment: A few commenters did not support the adoption of measure removal Factor 4, “performance or improvement on a measure does not result in better patient outcomes” for the Hospital VBP Program because the commenters were concerned the factor could be used as a reason to remove any measure that is not directly linked to clinical outcomes. These commenters asserted there is value in including multiple types of measures in the Hospital VBP Program, not just outcomes-related measures.

Response: As we discussed in the proposed rule, the removal factors are intended to be considerations taken into account when deciding whether or not to remove measures, but are not firm requirements. There may be circumstances in which a measure that meets one or more factors for removal should be retained regardless, because the drawbacks of removing a measure could be outweighed by other benefits to retaining the measure. Although we strive to have measures in our programs that can drive improvement in patient health outcomes, we agree that other types of measures may be of value to the program as well.

Comment: A few commenters did not support the adoption of measure removal Factor 6, “collection or public reporting of a measure leads to negative unintended consequences other than patient harm,” because the commenters believed hospitals often claim unintended consequences as a reason to oppose quality measurement without offering evidence to support such claims. The commenters therefore recommended that CMS require documented evidence of real consequences as opposed to potential or speculative consequences before removing a measure under this factor.

Response: We thank commenters for their recommendation. We intend to take multiple sources of evidence into account when proposing to remove measures under any of the removal factors and always welcome stakeholder input.

Comment: Many commenters supported the addition of measure removal Factor 8, “the costs associated with a measure outweigh the benefit of its continued use in the program” to the Hospital VBP Program. Several commenters supported the adoption of measure removal Factor 8 for the Hospital VBP Program because they believe it is appropriate for CMS to consider the costs to providers and the agency itself in considering whether to remove a measure under this factor. A number of commenters stated that they believed the proposed new removal factor will provide CMS the flexibility to streamline measures to meet the goals of the Meaningful Measures Initiative by reducing measures that are inappropriately burdensome and ensuring greater consistency in measure evaluation methodologies across programs. A few commenters expressed their agreement that the five types of costs outlined in the proposed rule are important to consider when creating new or revised meaningful measures for quality and value-based payment programs. Another commenter believed that eliminating measures that are costly and have a limited benefit to program objectives allows providers to focus more efforts on reporting and improving performance on measures that benefit provider patient populations.

Response: We thank commenters for their support. We note that the five types of costs listed in the FY 2019 IPPS/LTCH PPS proposed rule were intended to provide examples of costs we would assess when removing a measure under measure removal

Factor 8, and were not intended to comprise an exhaustive list of cost types. Costs assessed under this measure removal factor would include direct and indirect costs, financial and otherwise, to stakeholders including but not limited to, patients, caregivers, providers, CMS, healthcare researchers, healthcare purchasers, and other entities. We also believe that while a measure's use in the Hospital VBP Program may benefit many entities, a key benefit is to patients and their caregivers through incentivizing the provision of high quality care and through providing publicly reported data regarding the quality of care available.

Comment: Several commenters that supported the adoption of measure removal Factor 8 also requested additional information and transparency on the factors used to determine costs and benefits, including factors that deem the cost to be burdensome, whether the costs exceed the benefits, the nature of the burden that the removal of a measure relieves, and methods or criteria used to assess when the measure cost or burden outweighs the benefits of retaining it. One commenter supported measure removal Factor 8, but did not agree with how CMS applied its cost assumptions, questioning how costs can be reduced for hospitals by removing a measure from one program when the measure remains in another program.

Response: We intend to be transparent in our assessment of measures under this measure removal factor. As described above, there are various considerations of costs and benefits, direct and indirect, financial and otherwise, that we will evaluate in applying removal Factor 8, and we will take into consideration the perspectives of multiple stakeholders. However, because we intend to evaluate each measure on a

case-by-case basis, and each measure has been adopted to fill different needs in the Hospital VBP Program, we do not believe it would be meaningful to identify a specific set of assessment criteria to apply to all measures. We believe costs include costs to stakeholders such as patients, caregivers, providers, CMS, and other entities. In addition, we note that the benefits we will consider center around benefits to patients and caregivers as the primary beneficiaries of our quality reporting and value-based payment programs. When we propose to remove a measure under this measure removal factor, we will provide information on the costs and benefits we considered in evaluating the measure.

We also recognize that hospitals would still be required to monitor measures removed from one program but retained in another quality program. However, we believe that the simplification benefits hospitals because they will no longer be required to identify discrepancies in reporting and identify whether those discrepancies are due to differing measure specifications or due to potential CMS measure calculation error. Furthermore, we believe this simplification will benefit patients and caregivers because they will not need to review data submitted on the same or similar metrics through multiple programs to compare quality of care across multiple providers.

Comment: Several commenters supported the adoption of measure removal Factor 8 but also recommended specific things the commenters believed CMS should consider in the assessment of costs and benefits, including: the mode of data collection and reporting; input from relevant clinical experts and patient perspectives; the value of consistency in program measure sets; whether removing measures creates a gap in the

measure set; resources required for providers to perform well on the measure; costs associated with contracting out or otherwise paying external vendors; costs associated with adding processes to collect data to inform the measure; whether new processes added to collect data on the measure will duplicate efforts with existing tasks; and whether the process involves completing more steps or tasks as it produces outputs for measurement. Commenters also requested that CMS clarify the process for seeking input of stakeholders in the decision-making process.

Response: We note that in our proposal to adopt this measure removal factor (83 FR 20409), we stated that we will evaluate costs and benefits on a case-by-case basis and identified several types of costs to provide examples of costs which we would evaluate in this analysis. These costs include, but are not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submitting/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including maintenance and public display; and/or (5) the provider and clinician cost associated with compliance with other federal and/or state regulations (if applicable). This was not intended to be a complete list of the potential factors to consider in evaluating measures.

The other factors suggested by commenters are additional factors that we will consider in evaluating the costs and benefits of each measure on a case-by-case basis

under measure removal Factor 8. For example, resources for quality improvement is an example of a cost that would be evaluated on a case-by-case basis because we believe that investing resources in quality improvement is an inherent part of delivering high-quality, patient-centered care, and is therefore, generally not considered a part of the quality reporting program requirements. However, there may be cases where a measure would require such a specific quality improvement initiative that it would be appropriate to consider this cost to be associated with the measure. We also value transparency in our processes, and continually seek stakeholder input through education and outreach activities, such as webinars and national provider calls, stakeholder listening sessions, through rulemaking, and other collaborative engagements with stakeholders.

Comment: Several commenters did not support the adoption of proposed measure removal Factor 8 because commenters believed the factor may not adequately consider the value a measure holds for beneficiaries or consumers, and other commenters requested additional information about how the calculation applies to beneficiaries. Some commenters recommended that CMS develop a standardized evaluation and scoring system with multi-stakeholder input to ensure measure removal Factor 8 appropriately balances the needs of all healthcare stakeholders, and to consider how beneficiary decision-making occurs and ensure that policies do not demand beneficiaries make life-altering decisions based on scant information, inadequate tools, or insufficient assistance. A few commenters requested that CMS adopt a more inclusive process that accounts for the perspective of both patients and clinicians when making measure removal determinations.

Response: We believe that various stakeholders may have different perspectives on how to define costs as well as benefits. Because of these challenges, we intend to evaluate each measure on a case-by-case basis, while considering input from a variety of stakeholders, including, but not limited to: patients, caregivers, patient and family advocates, providers, provider associations, healthcare researchers, healthcare purchasers, data vendors, and other stakeholders with insight into the direct and indirect benefits and costs (financial and otherwise) of maintaining the specific measure in the Hospital VBP Program. However, we also agree that while a measure's use in the Hospital VBP Program may benefit many entities, the primary benefit is to patients and their caregivers through incentivizing high-quality care and providing publicly reported data regarding the quality of care available. We note that we intend to assess the costs and benefits to program stakeholders, including but not limited to, those listed above.

Comment: A few commenters that did not support adoption of removal measure removal Factor 8 expressed concern that the proposal does not define how burden and benefits would be evaluated or weighted. One commenter asked how that definition is to be tested and what results will empirically determine whether there is, or is not, a cost-benefit of the measure.

Response: We believe that various stakeholders may have different perspectives on how to define costs as well as benefits. Because of these challenges, we intend to evaluate each measure on a case-by-case basis, while considering input from a variety of stakeholders, including, but not limited to: patients, caregivers, patient and family advocates, providers, provider associations, healthcare researchers, healthcare purchasers,

data vendors, and other stakeholders with insight into the direct and indirect benefits and costs, financial and otherwise, of maintaining the specific measure in the Hospital VBP Program. We note that we intend to assess the costs and benefits to all program stakeholders, including but not limited to, those listed above. We do not believe it is necessary to empirically test measure removal factors. These factors are part of a coordinated approach to developing a balanced measure set, and may affect measures in different programs differently because of the specific needs of each program

Comment: A few commenters that did not support removal Factor 8 expressed concern that the proposal did not reference the cost to patients or to the Medicare program for the treatment people may need following events. One commenter asserted it is difficult to measure the benefits to Medicare beneficiaries (such as good quality of care, timely care, good communication between providers and individuals and their family caregivers, and quality of life) using a dollar metric. Another commenter recommended that CMS also consider whether a more efficient alternative reporting method is available to collect the performance data under this analysis. This commenter further stated that any assessments of the benefits of continued use of a given measure must account for the public's right to quality and cost transparency and consumers' reliance on publicly available information to make important healthcare decisions, in addition to the potential impact of the measure on improving care quality (for example, size of performance gap).

Response: We do intend to assess the costs and benefits to a variety of program stakeholders, including but not limited to, those listed above. As noted, the list of

potential costs we described in the proposed rule was not intended to be a complete list of the potential factors to consider in evaluating measures. The other factors suggested by commenters are additional factors that we will consider in evaluating the costs and benefits of each measure on a case-by-case basis under measure removal Factor 8. We also agree with the commenter that it is useful to consider whether a more efficient alternative is available to collect performance data and believe it would be appropriate to consider this in our evaluation of measures under measure removal Factor 8. While a measure's use in the Hospital VBP Program may benefit many entities, the primary benefit is to patients and their caregivers through incentivizing provision of high quality care and through providing publicly reported data regarding the quality of care available. Therefore, we intend to consider the benefits, especially those to patients and their families, when evaluating measures under this measure removal factor.

Comment: A few commenters that did not support measure removal Factor 8 expressed concern that focusing on cost alone may be problematic and does not reflect the potential for assessing or improving care quality that are important to patients and families.

Response: We intend to balance the costs with the benefits to a variety of stakeholders. These stakeholders include, but are not limited to, patients and their families or caregivers, providers, the healthcare research community, healthcare purchasers, and patient and family advocates. Because for each measure the relative benefit to each stakeholder may vary, we believe that the benefits to be evaluated for each

measure are specific to the measure and the original rationale for including the measure in the program.

We also understand that while a measure's use in the Hospital VBP Program may benefit many entities, the primary benefit is to patients and caregivers through incentivizing the provision of high quality care and through providing publicly reported data regarding the quality of care available. One key aspect of patient benefits is assessing the improved beneficiary health outcomes if a measure is retained in our measure set. We believe that these benefits are multifaceted, and are illustrated through the domains of the Meaningful Measures Initiative. When the costs associated with a measure outweigh the evidence supporting the benefits to patients with the continued use of a measure in the Hospital VBP Program we believe it may be appropriate to remove the measure from the program.

Comment: One commenter expressed its belief that a fair and appropriate number of measures should be retained in the Hospital VBP Program and that measure removals and adoptions should take into account the time and resources required to adjust and adapt to changing program requirements. The commenter specifically recommended that CMS implement a standard 24-month timeline for measure adoptions and removals in order to allow hospitals time to budget, plan, adopt, and operationalize any necessary changes to their plans and workflows.

Response: We attempt to ensure that a fair and appropriate number of measures are retained in the Hospital VBP Program. We note that in our proposal to adopt this measure removal factor (83 FR 20409), we stated that we will evaluate costs and benefits

on a case-by-case basis and identified several types of costs to provide examples of costs which we would evaluate in this analysis. These costs include, but are not limited to, those listed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20409). This was not intended to be a complete list of the potential factors to consider in evaluating measures. The other factors suggested by commenters are additional factors that we will consider in evaluating the costs and benefits of each measure on a case-by-case basis under measure removal Factor 8. Regarding commenter's recommendation to implement a 24-month timeline for measure adoptions and removals, we do not believe such a timeline is necessary to adopt a measure given that hospitals would have been reporting measure data under the Hospital IQR Program prior to adoption into the Hospital VBP Program. We also believe it is important to retain flexibility in the timing of removing measures from the program, especially when we have determined that the costs of continued use in the program outweigh the benefits.

Comment: One commenter recommended that CMS adopt an additional removal factor addressing measure reliability and/or validity, under which CMS would remove an existing measure from the program when a new measure that provides results which are more reliable and/or valid becomes available. The commenter expressed its belief that such a factor would better recognize that as measure development and implementation become more sophisticated, these new measures are better able to precisely and accurately represent the quality of care provided to patients.

Response: We thank the commenter for its suggestion and will take this under consideration when considering future policies for the program. We consider validity

and reliability in determining whether to adopt a measure and will continue to do so as we evaluate the ongoing measure sets.

Comment: One commenter recommended that the Hospital VBP Program also adopt measure retention factors, such as: (1) measure aligns with other CMS and HHS policy goals; (2) measure aligns with other CMS programs, including other quality reporting programs; and (3) measure supports efforts to move the program towards reporting electronic measures.

Response: We note that the Hospital VBP Program currently has a policy to retain measures from prior program years for each successive program year, unless otherwise proposed and finalized. We thank commenter for their suggestions and also note that under the Meaningful Measures Initiative, as described in section I.A.2. of the preambles of the proposed rule and in this final rule, we will take into consideration measures that could allow us to align across programs and/or with other payers, as well as to minimize the level of burden for health care providers (for example, through a preference for EHR-based measures where possible, such as electronic clinical quality measures).

After consideration of the public comments we received, we are finalizing our proposals to adopt for the Hospital VBP Program the measure removal factors currently in the Hospital IQR Program, and a measure removal Factor 8, where “the costs associated with a measure outweigh the benefit of its continued use in the program” beginning with FY 2019 program year.

In addition to the proposals discussed above, to further align with policies adopted in the Hospital IQR Program (74 FR 43864), we proposed that if we believe continued use of a measure in the Hospital VBP Program poses specific patient safety concerns, we may promptly remove the measure from the program without rulemaking and notify hospitals and the public of the removal of the measure along with the reasons for its removal through routine communication channels to hospital, vendors, and QIOs, including, but not limited to, issuing memos, emails, and notices on the QualityNet website. We would then confirm the removal of the measure from the Hospital VBP Program measure set in the next IPPS rulemaking. In circumstances where we do not believe that continued use of a measure raises specific patient safety concerns, we would use the regular rulemaking process to remove a measure.

Comment: Several commenters supported the proposal to remove a measure from the Hospital VBP Program without rulemaking if it poses a patient safety concern.

Response: We thank the commenters for their support.

Comment: A few commenters recommended that CMS be transparent in the process for determining if a measure meets this criterion and to promptly respond to stakeholders' concerns when potential patient safety concerns are identified. One commenter recommended use of the rulemaking process and stakeholder input wherever possible because partnership in reaching measure consensus will help to avoid unintended consequences for all. Another commenter requested clarification on the level of evidence needed to rapidly remove a measure from a program without rulemaking. A third commenter recommended that CMS continuously monitor the impact of measures

and emerging literature to better position itself to remove measures proactively before widespread patient harm occurs rather than after harm has already occurred.

Response: We thank commenters for their recommendations. We intend to be transparent about our concerns and seek input from relevant stakeholders when possible, depending on the urgency of the patient safety concern. While we do not believe it is possible to anticipate the exact level of evidence that would be required to take such action, we would take such considerations seriously and do not anticipate making such a decision based on scant evidence. Rather, we believe that a high level of evidence would be required in most circumstances, depending on the patient safety concern at issue, such as consistent evidence from multiple sources. We currently monitor various sources to assess impacts and effects of measures and plan to continue doing so.

Comment: A few commenters did not support CMS' proposal to remove measures for patient safety concerns without rulemaking. Other commenters expressed concern with circumventing the rulemaking process and delaying opportunity for public comment from multiple stakeholders. One commenter expressed concern because numerous public and private purchasers have come to employ measures from the Hospital VBP Program in their own accountability strategies. Another commenter expressed concern with how this approach may impact a hospital's overall performance score and payment adjustment, especially for safety-net hospitals and those operating in underserved areas that treat a disproportionate share of high risk patients. A third commenter recommended that this authority should be used narrowly and rarely, if at all, and only in the most urgent of circumstances. This commenter also recommended that it

be exercised transparently in ways that prioritize beneficiary safety and access to information, and, if it is used, to seek public comment, at that time, on continued use of this authority.

Response: We thank the commenters for their input. We intend to use this authority narrowly and in only those circumstances that pose specific and serious patient safety concerns. Although we may take this action outside of rulemaking, we intend to be transparent about concerns and seek input from relevant stakeholders to the extent possible, depending on the urgency of the concern. We also appreciate commenter's concern regarding the impact of a measure removal under this policy on a hospital's overall performance score and payment adjustment, and will attempt to mitigate such impacts to the extent program requirements may allow. While we note that we would remove a measure under this policy based on specific patient safety concerns, we would also analyze the potential impacts on scoring and payment adjustments. However, any changes to program requirements, including any potential changes to the minimum number of measures required for a domain score, would be proposed through rulemaking. We will also consider commenters' other suggestion regarding transparency, for the future.

After consideration of the public comments we received, we are finalizing our proposal to allow the Hospital VBP Program to promptly remove a measure without rulemaking if we believe the measure poses specific patient safety concerns.

c. Removal of Ten Measures from the Hospital VBP Program

By publicly reporting quality data, we strive to put patients first, ensuring they, along with their clinicians, are empowered to make decisions about their own healthcare using information that are aligned with meaningful quality measures. The Hospital VBP Program, together with the Hospital Readmissions Reduction Program and the HAC Reduction Program, represents a key component of the way that we bring quality measurement, transparency, and improvement together with value-based purchasing to the inpatient care setting. We have undertaken efforts to review the existing Hospital VBP Program measure set in the context of these other programs, to identify how to reduce costs and complexity across programs while continuing to incentivize improvement in the quality and value of care provided to patients. To that end, we have begun reviewing our programs' measures in accordance with the Meaningful Measures Initiative we described in section I.A.2. of the preambles of the proposed rule and in this final rule.

As part of this review, we stated in the proposed rule that we have taken a holistic approach to evaluating the appropriateness of the Hospital VBP Program's current measures in the context of the measures used in two other IPPS value-based purchasing programs (that is, the Hospital Readmissions Reduction Program and the HAC Reduction Program), as well as in the Hospital IQR Program. We view the three value-based purchasing programs together as a collective set of hospital value-based purchasing programs. Specifically, we believe the goals of the three value-based purchasing programs (the Hospital VBP, Hospital Readmissions Reduction, and HAC Reduction

Programs) and the measures used in these programs together cover the Meaningful Measures Initiative quality priorities of making care safer, strengthening person and family engagement, promoting coordination of care, promoting effective prevention and treatment, and making care affordable, but that the programs should not add unnecessary complexity or costs associated with duplicative measures across programs. The Hospital Readmissions Reduction Program focuses on care coordination measures, which address the quality priority of promoting effective communication and care coordination within the Meaningful Measures Initiative. The HAC Reduction Program focuses on patient safety measures, which address the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care.

As part of this holistic quality payment program strategy, we stated in the proposed rule that we believe the Hospital VBP Program should focus on the measurement priorities not covered by the Hospital Readmissions Reduction Program or the HAC Reduction Program. We stated that the Hospital VBP Program would continue to focus on measures related to: (1) the clinical outcomes, such as mortality and complications (which address the Meaningful Measures Initiative quality priority of promoting effective treatment); (2) patient and caregiver experience, as measured using the HCAHPS survey (which addresses the Meaningful Measures Initiative quality priority of strengthening person and family engagement as partners in their care); and (3) healthcare costs, as measured using the Medicare Spending per Beneficiary measure (which addresses the Meaningful Measures Initiative priority of making care affordable). We stated that we believe this framework will allow hospitals and patients to continue to

obtain meaningful information about hospital performance and incentivize quality improvement while also streamlining the measure sets to reduce duplicative measures and program complexity so that the costs to hospitals associated with participating in these programs does not outweigh the benefits of improving beneficiary care.

In the FY 2019 IPPS/LTCH/PPS proposed rule (83 FR 20409 through 20412), we proposed to remove the following 10 measures previously adopted for the Hospital VBP Program:

- Elective Delivery (NQF #0469) (PC-01);
- National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138) (CAUTI);
- National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139) (CLABSI);
- American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure (NQF #0753) (Colon and Abdominal Hysterectomy SSI);
- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) (MRSA Bacteremia);
- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717) (CDI);

- Patient Safety and Adverse Events (Composite) (NQF #0531) (PSI 90),<sup>235</sup>
- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Acute Myocardial Infarction (NQF #2431) (AMI Payment);
- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Heart Failure (NQF #2436) (HF Payment); and
- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Pneumonia (NQF #2579) (PN Payment).

In addition to the measure-specific comments discussed below, we received a number of comments addressing all measures proposed for removal as a single set.

Comment: Many commenters expressed general support for CMS' proposals to remove 10 measures that are duplicative, burdensome, or otherwise do not meet the goals of CMS' Meaningful Measure Initiative from the Hospital VBP Program. Many of these commenters expressed particular support for these measure removals because they would reduce the number of duplicative measures used across CMS' quality programs and thereby increase program alignment. Some commenters noted that removing these measures would simplify program participation requirements and reduce the time and resources required to track performance across multiple programs, and in turn allow hospitals more time to focus on implementing quality care improvements. A few commenters stated this program alignment will also reduce confusion for patients and providers associated with each program's respective focus and purpose. One commenter

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<sup>235</sup> We note that measure stewardship of the recalibrated version of the Patient Safety and Adverse Events Composite (PSI 90) is transitioning from AHRQ to CMS and, as part of the transition, the measure will be referred to as the CMS Recalibrated Patient Safety Indicators and Adverse Events Composite (CMS PSI 90) when it is used in CMS programs.

expressed general support for these measure removals as a way to streamline and align CMS' quality programs, but asserted the removals will not have any actual impact on the burden of reporting as the measures will continue to be used in other programs.

Response: We thank commenters for their support. We recognize that hospitals would still be required to monitor measures removed from one program, but retained in another quality program. However, we believe this simplification benefits hospitals because they will reduce the burden associated with identifying discrepancies in reporting and determining whether those discrepancies are due to differing measure specifications or due to CMS measure calculation error. Furthermore, we believe this simplification will benefit patients and caregivers because they will not need to review data submitted on the same or similar metrics through multiple programs to compare quality of care across multiple providers.

Comment: One commenter expressed particular support for a smaller set of measures in the Hospital VBP Program because the commenter believed this would enable hospitals that have historically fared poorly in the Hospital VBP Program to improve performance and potentially earn an incentive payment.

Response: We thank the commenter for its support.

Comment: A few commenters did not support CMS' proposal to remove any measures from the Hospital VBP Program. Some of these commenters asserted the measures proposed for removal are all valid for use in a value-based purchasing program and therefore did not support their removal.

Response: We agree with commenters that the measures proposed for removal from the Hospital VBP Program are valid measures; for this reason, we are not proposing to remove the measures from all of CMS' quality programs, only to reduce instances where the same measure is used in multiple programs such that the costs outweigh the benefits of their continued use. We note that the AMI Payment, HF Payment, PN Payment, and PC-01 measures will continue to be used in the Hospital IQR Program. While the Hospital IQR Program is not a value-based purchasing program, we believe continued public reporting of these measures will appropriately incentivize continued high performance or improvement on these measures. We further note that, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, below, we are not finalizing the removal of six safety measures and note that those measures will continue to be used both in the Hospital VBP Program and in the HAC Reduction Program.

(1) Removal of PC-01: Elective Delivery (NQF #0469)

We proposed to remove the Elective Delivery (NQF #0469) (PC-01) measure beginning with the FY 2021 program year because the costs associated with the measure outweigh the benefit of its continued use in the program – proposed removal Factor 8. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38262), we finalized both the benchmark at 0.000000 and the achievement threshold at 0.000000 for the PC-01 measure for the FY 2020 program year, meaning that at least 50 percent of hospitals that met the case minimum performed 0 elective deliveries for the measure during the baseline period of CY 2016. We refer readers to the FY 2013, FY 2014, and FY 2015 IPPS/LTCH PPS final rules (77 FR 53599 through 53605; 78 FR 50694 through 50699; and 79 FR 50080

through 50081, respectively) for a more detailed discussion of the general scoring methodology used in the Hospital VBP Program. Based on past performance on the measure, we anticipate that continued use of the PC-01 measure in the Hospital VBP Program would result in more than half of hospitals with a calculable score for this measure earning the maximum 10 achievement points. We anticipate that the remaining hospitals with a calculable score would be awarded points based on improvement only because they will not have met the achievement threshold, earning zero to nine improvement points. Therefore, we believe the measure no longer meaningfully differentiates performance among most participating hospitals for scoring purposes in the Hospital VBP Program.

We continue to believe that avoiding early elective delivery is important; however, because overall performance on the PC-01 measure has improved over time and we anticipate the measure will have little meaningful effect on the TPS for most hospitals, we believe the measure is no longer appropriate for the Hospital VBP Program. In order to continue tracking and reporting rates of elective deliveries to incentivize continued high performance on the measure, this measure would remain in the Hospital IQR Program. We believe that maintaining the measure in the Hospital IQR Program, which publicly reports measure performance, will be sufficient to incentivize continued high performance or improvement on the measure. At the same time, we believe that removing the measure from the Hospital VBP Program will reduce costs and potential confusion for providers and clinicians to track the measure in both the Hospital IQR and

Hospital VBP Programs, which may include reviewing different reports and tracking slightly different measure rates across programs.

Based on the reasons described above, we believe that under the measure removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program, which we are finalizing in section IV.I.2.b. of the preamble of this final rule, the costs of keeping the PC-01 measure in the Hospital VBP Program outweigh the benefits because the measure is costly for health care providers and clinicians to review multiple reports on this measure that is being retained in the Hospital IQR Program and our analyses show that the measure no longer meaningfully differentiates performance among participating hospitals for scoring purposes in the Hospital VBP Program.

Therefore, we proposed to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year, with data collection on this measure for purposes of the Hospital VBP Program ending with December 31, 2018 discharges, based on proposed removal Factor 8 – because the costs associated with the measure outweigh the benefit of its continued use in the program.

Comment: The majority of commenters that specifically commented on the proposed removal of PC-01 supported removal of PC-01 from the Hospital VBP Program. One commenter supported the removal of PC-01 because although hospitals should continue to strive for 100 percent of early elective deliveries to have a valid clinical indication, performance on this measure should not be expected to reach zero percent, nor should hospital payments in value-based purchasing programs be based on this benchmark. One commenter supported removal because the measure no longer

meaningfully differentiates hospitals for purposes of Hospital VBP Program scoring.

One commenter supported removal but believed unintended patient harm is a more appropriate rationale because the commenter believed striving for zero percent performance is not a safe practice as it may inadvertently prevent a medically indicated delivery from being performed prior to 39 weeks due to facilities trying to reach a zero percent performance threshold.

Response: We thank commenters for their support. We agree that with both the benchmark at 0.000000 and the achievement threshold at 0.000000 for the PC-01 measure for the FY 2020 program year, we believe the measure no longer meaningfully differentiates performance among most participating hospitals for Hospital VBP scoring purposes. We lack data or anecdotal evidence indicating use of this measure in CMS' quality programs is causing unintended consequences. However, because this measure will remain in the Hospital IQR Program, we will continue to monitor for any unintended consequences associated with its continued use in a CMS reporting program.

Comment: One commenter did not support CMS' proposal to remove the PC-01 measure from the Hospital VBP Program because it could detract focus from this important (as indicated by CMS) measure, thus the commenter recommended that the PC-01 measure be retained but allow its collection via electronic means (that is, as an eCQM) for the Hospital VBP Program, the Hospital IQR Program, and Medicare and Medicaid Promoting Interoperability Programs and, where possible, allow organizations to elect (as resources and systems allow) the ability to submit the measures electronically or via manual abstraction.

Response: As discussed in section VIII.A.5.b.(9)(e) of the preamble of this final rule, the chart-abstracted version of the PC-01 measure will be retained in the Hospital IQR Program for public reporting, which we believe will be sufficient to incentivize continued high performance or improvement on the measure. We note that the eCQM version of the PC-01 measure has not been adopted into the Hospital VBP Program. We also refer readers to sections VIII.A.5.b.(9)(e) and VIII.D.8.b. of the preamble of this final rule for a discussion about our decisions to finalize removal of the eCQM version of PC-01 from the Hospital IQR Program and the Medicare and Medicaid Promoting Interoperability Programs.

Comment: One commenter disagreed with applying measure removal Factor 8 as a rationale for CMS' proposal to remove the PC-01 measure from the Hospital VBP Program because the commenter believed removing the measure from the Hospital VBP Program while retaining it in the Hospital IQR Program is inconsistent with measure removal Factor 8.

Response: We do not agree that removing the measure from the Hospital VBP Program while retaining it in the Hospital IQR Program is inconsistent with measure removal Factor 8. We believe the costs and benefits of a measure should be evaluated on a program by program basis because the costs and benefits of continued use of a measure in one program may be different than the costs and benefits of continued use in another program. As discussed in the proposed rule (83 FR 20410), we believe that the costs associated with retaining the PC-01 measure outweigh the benefits associated with its continued use in the Hospital VBP Program because we believe the measure no longer

meaningfully differentiates performance among most participating hospitals for scoring purposes in the Hospital VBP Program. We believe removing PC-01 from the Hospital VBP Program while maintaining it in the Hospital IQR Program will reduce costs and potential confusion for providers to review different reports and track slightly different measure rates across programs, while continuing to incentivize continued high performance through public reporting in the Hospital IQR Program.

After consideration of the public comments we received, we are finalizing our proposal to remove the Elective Delivery (NQF #0469) (PC-01) measure from the Hospital VBP Program beginning with the FY 2021 program year.

(2) Maintenance of Healthcare-Associated Infection (HAI) Measures and the Patient Safety and Adverse Events (Composite) Measure

We proposed to remove the following five measures of healthcare-associated infections (HAIs) from the Hospital VBP Program beginning with the FY 2021 program year because the costs associated with the measures outweigh the benefit of their continued use in the program – proposed removal Factor 8:

- National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138) (CAUTI);
- National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139) (CLABSI);
- American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection Outcome Measure (NQF #0753) (Colon and Abdominal Hysterectomy SSI);

- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) (MRSA Bacteremia); and

- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717) (CDI).

We also proposed to remove the Patient Safety and Adverse Events (Composite) (PSI 90) (NQF #0531) because the costs associated with the measure outweigh the benefit of its continued use in the program – proposed removal Factor 8.

As discussed in section IV.I.2.b. of the preamble of the proposed rule, one of the main goals of our Meaningful Measures Initiative is to apply a parsimonious set of the most meaningful measures available to track patient outcomes and impact. While we continue to consider patient safety and reducing HAIs as high priorities (as reflected in the Meaningful Measures Initiative quality priority of making care safer by reducing harms caused in the delivery of care), the six measures listed above are all used in the HAC Reduction Program, which specifically focuses on reducing hospital-acquired conditions and improving patient safety outcomes. While there are differences in the scoring methodology between the Hospital VBP Program and the HAC Reduction Program, the HAC Reduction Program's incentive payment structure, like the Hospital VBP Program, ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected measures, thereby incentivizing performance improvement on these measures among participating hospitals. In the proposed rule, we stated that we

believe removing these measures from the Hospital VBP Program would reduce costs and complexity for hospitals to separately track the confidential feedback, preview reports, and publicly reported information on these measures in both the Hospital VBP and HAC Reduction Programs. We further stated that we believe retaining these measures in the HAC Reduction Program and removing them from the Hospital VBP Program would best support the holistic approach to the measures used in the three quality payment programs as described above, while continuing to keep patient safety and improvements in patient safety as high priorities. We refer readers to section IV.J.4.b., d. and h. of the preambles of the proposed rule and this final rule for how data for the same HAI measures in the HAC Reduction Program will continue to be reported by hospitals to CMS via the CDC's NHSN and posted on our *Hospital Compare* website. In the proposed rule, we stated that we believe removing these measures from the Hospital VBP Program, but retaining them in the HAC Reduction Program, would strike an appropriate balance of benefits and costs associated with these measures across payment programs.

Therefore, we proposed to remove the CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, MRSA Bacteremia, and CDI measures from the Hospital VBP Program beginning with the FY 2021 program year, with data collection on these measures for purposes of the Hospital VBP Program ending with December 31, 2018 discharges, based on proposed removal Factor 8 – because the costs associated with the measures outweigh the benefit of their continued use in the program. We also proposed to remove the PSI 90 measure from the Hospital VBP Program effective with the

effective date of the FY 2019 IPPS/LTCH PPS final rule based on proposed removal Factor 8 – because the costs associated with the measure outweigh the benefit of its continued use in the program.<sup>236</sup> As the PSI 90 measure would not be incorporated into TPS calculations until the FY 2023 program year, we stated in the proposed rule that we could operationally remove this measure from the program sooner than the HAI measures. We also refer readers to section IV.I.4.a.(2) and b. of the preamble of the proposed rule, where we discussed our proposals to remove the Safety domain from the Hospital VBP Program and to increase the weight of the Clinical Care domain (which we proposed to rename as the Clinical Outcomes domain) if our proposals to remove all of the current Safety domain measures were adopted, beginning with the FY 2021 program year.

Comment: Many commenters did not support CMS’ proposals to remove the five HAI measures and PSI 90 from the Hospital VBP Program because the commenters believe patient safety measures should remain in all payment programs to sufficiently incentivize continued improvement on these measures and prioritize practices that ensure safe care. A number of commenters expressed concern that the HAC Reduction Program payment penalty does not sufficiently incentivize medium- and high-performing hospitals to continue to strive for continuous improvement. A few commenters expressed concern that removal of the HAI measures from the Hospital VBP Program sends a message to hospitals that mediocre performance on hospital safety measures is acceptable, and could

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<sup>236</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38256), we finalized the adoption of the PSI 90 measure beginning with the FY 2023 program year. We proposed to remove this measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule, meaning the measure would not be used in calculating hospitals’ TPS for any program year.

result in hospitals receiving incentive payments under the Hospital VBP Program despite having a high rate of preventable infections. One commenter expressed concern that even with the HAI measures being used in both the Hospital VBP Program and HAC Reduction Program, some data may indicate hospitals have performed worse over time on four of these measures (MRSA, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI). Another commenter expressed concern that retaining the measures in only the HAC Reduction Program might result in continually penalizing hospitals that serve predominantly high-risk patients even if a hospital's individual performance improves from year to year. Another commenter expressed concern that the penalty only structure of the HAC Reduction Program could create a defeatist attitude and recommended that CMS examine ways to use simple, rationalized, and appropriately-incented payment structures to encourage quality improvement within hospitals.

Response: We agree that patient safety is a high priority focus of CMS' quality programs and, as part of the Meaningful Measures Initiative, we strive to put patients first. Within the framework of the Meaningful Measures and Patients Over Paperwork initiatives, we seek to ensure quality measurement is simultaneously useful and impactful for patients and not overly burdensome on providers such that it takes time and resources away from providing quality care to patients. In evaluating the costs and benefits of keeping certain measures in more than one CMS quality program, we found determining the right balance in using these patient safety measures in our programs a challenge with various stakeholders who may have different perspectives.

We appreciate the many commenters who provided feedback and recommendations on this important topic. In particular, we appreciate commenters who conveyed the multifaceted benefits of retaining the safety measures in more than one value-based purchasing program, and we agree that while a measure's use in the Hospital VBP Program may benefit many entities, the primary benefit is to patients and their caregivers through incentivizing the provision of high quality care. While we initially sought to clearly delineate the safety focus between the Hospital VBP Program and the HAC Reduction Program for program simplification, we agree with commenters that these measures cover topics of critical importance to quality improvement and patient safety in the inpatient hospital setting. These measures track infections and adverse events that could cause significant health risks and other costs to Medicare beneficiaries; therefore, we agree it is appropriate and important to provide appropriate incentives for hospitals to avoid them through inclusion in more than one program.

In addition, regarding performance over time on the HAI measures, we refer readers to recently updated AHRQ/CMS results that show continued improvement on several hospital acquired conditions.<sup>237</sup> This report indicates that national efforts to reduce hospital-acquired conditions, such as adverse drug events and injuries from falls, helped prevent an estimated 8,000 deaths and saved approximately \$2.9 billion between

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<sup>237</sup> Agency for Healthcare Research and Quality (AHRQ), "Declines in Hospital-Acquired Conditions Save 8,000 Lives and \$2.9 Billion in Costs," News release, (June 5, 2018). Available at: [https://www.ahrq.gov/news/newsroom/press-releases/declines-in-hacs.html?utm\\_source=ahrq&utm\\_medium=en-3&utm\\_term=&utm\\_content=3&utm\\_campaign=ahrq\\_en6\\_5\\_2018](https://www.ahrq.gov/news/newsroom/press-releases/declines-in-hacs.html?utm_source=ahrq&utm_medium=en-3&utm_term=&utm_content=3&utm_campaign=ahrq_en6_5_2018); AHRQ. *National Scorecard on Hospital-Acquired Conditions: Updated Baseline Rates and Preliminary Results 2014–2016*. (June 2018). Available at: [https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/pfp/natlhacratereport-rebaselining2014-2016\\_0.pdf](https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/pfp/natlhacratereport-rebaselining2014-2016_0.pdf).

2014 and 2016. We believe these findings further support retaining the HAI measures and PSI 90 measure in both the Hospital VBP and HAC Reduction Programs, as both programs provide hospitals different but complimentary incentives to continually strive for improvement and high performance on these measures. Importantly, the Hospital VBP Program provides an incentive for hospitals to achieve high performance on these measures, with both positive as well as negative payment adjustments available based on each hospital's Total Performance Score; whereas the HAC Reduction Program imposes a payment reduction on only the lowest quartile of hospitals.

For these reasons, we are not finalizing our proposal to remove the five HAI measures or the PSI 90 measure from the Hospital VBP Program. We will retain the HAI measures and PSI 90 measure in both the Hospital VBP and HAC Reduction Programs. However, in order to reduce some cost and burden for providers in having to track these safety measures in multiple programs, while maintaining a strong financial incentive to perform well on the measures, we are finalizing our proposal to remove these measures from the Hospital IQR Program. We refer readers to section VIII.A.5.b.(2) of the preamble of this final rule where we discuss these measures in the Hospital IQR Program.

Comment: A number of commenters stated their belief that incentivizing performance improvement is preferable to the penalty-only structure of the HAC Reduction Program and therefore recommended that CMS should retain the HAI measures and the PSI 90 measure in the Hospital VBP Program and eliminate them from the HAC Reduction Program, or modify the HAC Reduction Program to incorporate positive payment incentives like those currently used in Hospital VBP Program. A few

of these commenters expressed concern that risk adjustment strategies within the HAC Reduction Program are limited and do not always account for facility-specific populations (for example, trauma or other facilities with a high percentage of high risk or vulnerable patients), which might result in continually penalizing hospitals that serve predominantly high-risk patients even if a hospital's individual performance improves from year to year, while the Hospital VBP Program provides incentives for each facility's performance improvement as well as penalties for poor performance.

One commenter specifically recommended retaining the PSI 90 measure in the Hospital VBP Program because the commenter believes the specific measures in the composite target the most important quality priorities, directly address patient outcomes that impact vulnerable Medicare beneficiaries, and encourage hospitals to prioritize the prevention of adverse events that are costly to treat. Another commenter expressed concern that removing these measures from the Hospital VBP Program will also eliminate hospitals' ability to receive positive incentive payments for HAI measure performance in the Hospital VBP Program. A third commenter noted the importance of recognizing that each of these programs is structured differently, with different goals and policy mechanisms, and therefore recommended that CMS retain patient safety measures in the quality program that will have the most potential to influence provider behavior.

Response: We thank the commenters for their recommendations. We agree with commenters that the HAC Reduction Program and Hospital VBP Program apply different scoring methodologies and different incentive structures. The HAC Reduction Program, as outlined in section 1886(p) of the Act, reduces payments to the lowest quartile of

hospitals for excess hospital-acquired conditions in order to increase patient safety in hospitals. The Hospital VBP Program, on the other hand, is an incentive program that redistributes a portion of the Medicare payments made to hospitals based on their performance on a variety of measures. All hospitals in the program are incentivized to achieve high performance on all the measures, and hospitals may receive positive as well as negative payment adjustments based on their overall performance. As stated above, we believe the critical importance of these measures to patient safety and maintaining a strong financial incentive to perform well on the measures warrant their continued inclusion in both programs.

Therefore, although these measures will continue to exist in more than one program, we clarify that they will be used and calculated under different scoring methodologies. Because we continue to consider patient safety and reducing hospital-acquired conditions high priorities (as reflected in the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care), we will continue to monitor the HAC Reduction and Hospital VBP Programs and analyze the impact of our program policies, including any unintended consequences associated with continuing to use these measures in more than one program. We refer readers to section VIII.A.5.b.(2) of the preamble of this final rule where we discuss finalizing our proposals to remove these measures from the Hospital IQR Program. We also refer readers to section IV.J.4.b., e. and h. of the preamble of this final rule for additional discussion of how the measures in the HAC Reduction Program will continue to be reported by hospitals, validated, and posted on the *Hospital Compare* website.

We note that all of these safety measures apply risk adjustment methodologies that have been reviewed by the NQF and are endorsed measures. We will continue to consult with the CDC and take feedback about measure risk adjustment into consideration for measure maintenance and future refinement of measure specifications.

Comment: A few commenters recommended that CMS explore other solutions to address duplication of safety measures across CMS quality programs, including adjusting reporting periods or allow hospitals to report on a measure once for use in multiple accountability programs. A few commenters believed that consolidating the measures in only a single program does not relieve a significant burden on facilities because data are submitted in the same way to be used for the various programs. One commenter noted that the costs associated with even one additional HAI in any of the impacted facility types far outweighs the estimated annual savings associated with removing the HAI measures from the Hospital VBP Program. One commenter believed that as many as 440,000 Americans die from preventable hospital errors each year.

Response: We thank commenters for their input. We recognize that there are many factors to be considered in assessing the costs and benefits of a measure under removal Factor 8. We will continue to monitor the HAC Reduction and Hospital VBP Programs and analyze the impact of our program policies, including the impact on patient safety and the reduction of preventable errors and HAIs.

Comment: Numerous commenters supported CMS' proposals to remove the five HAI measures and PSI 90 measure from the Hospital VBP Program because it would eliminate duplication of the measures with the HAC Reduction Program and thereby

reduce the possibility of double penalties in two separate pay-for-performance programs. Some commenters specifically supported removing these measures because they believed the duplicative and overlapping penalties are detrimental to hospitals serving vulnerable populations. Some of these commenters also supported removing these measures because doing so would reduce the potential for conflicting signals on performance. One commenter specifically expressed its belief that removing these measures will lead to greater alignment and consistency across programs.

Response: We thank the commenters for their support of our proposals. However, for the reasons discussed above, we are not finalizing removal of these measures from the Hospital VBP Program. We believe retaining these safety measures in two value-based purchasing programs (and removing them from the Hospital IQR Program, as finalized in section VIII.A.5.b.(2) of this final rule) will at least partly address the concerns of both commenters who want to retain these measures and commenters who supported their removal and de-duplication.

Comment: Several commenters stated that transparency through continued public reporting of performance data for the HAI measures is important. One commenter recommended that CMS make public additional information demonstrating the progress made in quality, patient safety, and patient outcomes since the implementation of the Hospital VBP and HAC Reduction Programs.

Response: We agree with commenters that maximizing transparency through public reporting of performance data is a critical component of CMS' quality programs, which is why we intend to continue publicly reporting the five HAI measures and the PSI

90 measure on the *Hospital Compare* website in a consumer-friendly manner, and data will continue to be available at: <https://data.medicare.gov/>. We reiterate that removing these measures from the Hospital IQR Program will not cease or otherwise interfere with collection or public reporting of these data. The HAI data will continue to be made publicly available on a quarterly basis and the PSI 90 data on an annual basis in a consumer-friendly manner and also through downloadable files. We note that section 1886(p)(6) of the Act requires the HAC Reduction Program to make information available to the public regarding hospital-acquired conditions of each applicable hospital on the *Hospital Compare* website in an easily understandable format.

We further note that section 1886(o)(10)(A) of the Act requires the Hospital VBP Program to make information available to the public regarding the performance of individual hospitals, including performance with respect to each measure, on the *Hospital Compare* website in an easily understandable format. We currently publicly report hospital-specific measure-level information from the Hospital VBP Program along with program-specific scores, and we will continue to solicit input from and share updates with stakeholders as we move forward with plans to publicly report Hospital VBP Program data in order to ensure the publicly reported information is sufficiently streamlined to avoid confusion while also providing the information necessary to assist patients in making decisions about their care.

After consideration of the public comments we received, we are not finalizing our proposals to remove the CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI,

MRSA Bacteremia, and CDI measures from the Hospital VBP Program or our proposal to remove the PSI 90 measure from the Hospital VBP Program.

### (3) Removal of Condition-Specific Payment Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20411 through 20412), we proposed to remove the following three condition-specific payment measures from the Hospital VBP Program, effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule, because the costs associated with the measures outweigh the benefit of their continued use in the program – proposed removal Factor 8:

- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Acute Myocardial Infarction (NQF #2431) (AMI Payment);
- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Heart Failure (NQF #2436) (HF Payment); and
- Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode-of-Care for Pneumonia (NQF #2579) (PN Payment).

As discussed in section IV.I.2.b. of the preamble of this final rule, one of the main goals of our Meaningful Measures Initiative is to apply a parsimonious set of the most meaningful measures. We also seek to reduce costs and complexity across the hospital quality programs.

Currently, the Hospital IQR and Hospital VBP Programs both include the Medicare Spending Per Beneficiary (MSPB) – Hospital (NQF #2158) (MSPB) measure, as well as the three condition-specific payment measures listed above. We continue to believe the condition-specific payment measures provide important data for patients and

hospitals, and we will continue to use these measures in the Hospital IQR Program along with the Hospital-Level, Risk-Standardized Payment Associated with an Episode-of-Care for Primary Elective Total Hip and/or Total Knee Arthroplasty measure, to provide more granular information to hospitals for reducing costs and resource use while maintaining quality care. However, we believe that continuing to retain the AMI Payment, HF Payment, and PN Payment measures in both the Hospital VBP and Hospital IQR Programs no longer aligns with current CMS and HHS policy priorities for reducing program costs and complexity. We believe the Hospital IQR Program's public reporting of these condition-specific payment measures provide hospitals and patients with sufficient information to make decisions about care and to drive resource use improvement efforts, while removing them from the Hospital VBP Program would reduce the costs and complexity for hospitals to separately track the confidential feedback, preview reports, and publicly reported information on these measures in both programs. We note that the Hospital VBP Program would still retain the MSPB measure, which is an overall hospital efficiency measure required under section 1886(o)(2)(B)(ii) of the Act. We also refer readers to section VIII.A.5.b.(6) of the preamble of this final rule, where we discuss finalizing our proposal to remove the MSPB measure from the Hospital IQR Program.

Therefore, we proposed to remove the AMI Payment, HF Payment, and PN Payment measures from the Hospital VBP Program effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule based on proposed removal Factor 8 – because the costs associated with the measures outweigh the benefit of their continued use in the

program. As the AMI Payment and HF Payment measures<sup>238</sup> would not be incorporated into TPS calculations until the FY 2021 program year and the PN Payment measure<sup>239</sup> would not be incorporated into TPS calculations until the FY 2022 program year, we can operationally remove these measures from the program effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

Comment: Many commenters specifically supported CMS' proposals to remove the three condition-specific payment measures from the Hospital VBP Program due to their overlap with the MSPB measure and the potential for this overlap to lead to unnecessary confusion among hospitals and patients. A number of commenters specifically noted the potential for these measures to double-count services that are already captured under the MSPB measure. One commenter expressed its belief that the condition-specific payment measures are no more actionable for providers than the MSPB measure because the measures themselves do not provide any insight into where improvements should be made in the delivery of care across the continuum. However, a number of these commenters also expressed support for the use of well-designed measures of cost and resource use and their ability to assist in assessing the value of care provided to patients. One commenter expressed particular support for CMS' proposal to remove the HF Payment measure.

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<sup>238</sup> In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56987 through 56992), we adopted the AMI Payment and HF Payment measures in the Hospital VBP Program beginning with the FY 2021 program year. We proposed to remove these measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule, meaning the measures would not be used in calculating hospitals' TPS for any program year.

<sup>239</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38251), we adopted the PN Payment measure in the Hospital VBP Program beginning with the FY 2022 program year. We proposed to remove this measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule, meaning the measure would not be used in calculating hospitals' TPS for any program year.

Response: We thank the commenters for their support.

Comment: Several commenters supported CMS' proposals to remove the condition-specific payment measures, but expressed concern about continued use of the current MSPB measure. A few commenters noted findings from ASPE's Report to Congress indicating that differences in MSPB measure performance were driven, in part, by the higher likelihood of dual-enrolled beneficiaries to use more expensive post-acute care settings, and to have higher charges during their stays in these settings. These commenters therefore urged CMS to improve the predictive power of the MSPB measure and ensure the MSPB measure can stand alone as a reliable and valid measure of efficiency and cost reduction in the Hospital VBP Program.

Response: We thank the commenters for their support, and note the MSPB measure is a valid and reliable measure of Medicare spending that was recently re-endorsed by the NQF.<sup>240</sup> As part of this endorsement review, we submitted both sociodemographic and socioeconomic status adjustment measure testing indicating such adjustments had a minimal impact on hospitals' measure scores, as well as demonstrating that dual eligibility had a low impact on MSPB measure scores and hospitals on the tails of score distributions were not disproportionately affected.<sup>241</sup> The NQF Cost and Resource Use Workgroup also acknowledged ASPE's findings, stating "the analysis in the appendix's Supplementary Table 7 suggest that these differences may be that measure

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<sup>240</sup> Medicare Spending Per Beneficiary (MSPB) – Hospital, National Quality Forum, <http://www.qualityforum.org/QPS/QPSTool.aspx?m=2158&e=1>. The MSPB Measure was re-endorsed as specified on September 11, 2017.

<sup>241</sup> National Quality Forum, *Cost and Resource Use 2016-2017 Final Technical Report* (August 20, 2017). Available at: [http://www.qualityforum.org/Publications/2017/08/Cost\\_and\\_Resource\\_Use\\_2016-2017\\_Final\\_Technical\\_Report.aspx](http://www.qualityforum.org/Publications/2017/08/Cost_and_Resource_Use_2016-2017_Final_Technical_Report.aspx).

scores are high for both duals and non-duals in these hospitals. This suggests that these hospitals are relatively higher-cost for all types of patients.”<sup>242</sup> For these reasons, we continue to believe the MSPB measure is an appropriate, reliable, and valid measure of Medicare spending, and is therefore appropriate for use in the Hospital VBP Program.

Comment: Some commenters did not support CMS’ proposals to remove the AMI Payment, HF Payment, and PN Payment measures because the commenters believed these measures serve as strong indicators of hospital efficiency and are key factors in ensuring hospital accountability. These commenters also noted that each of these measures, when paired with a corresponding quality measure, could provide a clear, meaningful picture of value-based care delivery. A few of these commenters also expressed concern that removing the condition-specific payment measures would revert the Hospital VBP Program to assessing efficiency and cost reduction using only the MSPB measure, which the commenters believe does not provide actionable or meaningful data to patients or providers and is difficult to operationalize at the service line level. One commenter expressed further concern that removing these measures from the Hospital VBP Program would reduce hospitals’ incentives to provide quality care by reducing transparency in public reporting. Another commenter believed that although these measures cannot currently provide a full vision of the value of care because they are not linked to corresponding quality measures, the condition-specific payment measures have the potential to improve coordination and transitions of care and provide patients

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<sup>242</sup> Ibid.

with more contextual data for using in medical decision-making, thereby increasing the efficiency of care across the full care continuum.

Response: We acknowledge commenters' concerns, and thank the commenters for their recommendations. Section 1886(o)(2)(B)(ii) of the Act requires that the Hospital VBP Program "include efficiency measures, including measures of 'Medicare spending per beneficiary.'" While we agree that condition-specific payment measures can provide hospitals with important data on payments associated with an episode of care, we continue to believe the MSPB measure also provides hospitals with valuable information because this measure captures a wide range of services provided in the inpatient hospital setting. In addition, we note the MSPB measure has been NQF-endorsed and is considered to be a valid, reliable measure of Medicare spending.

We disagree with commenters' suggestions that removing these condition-specific payment measures from the Hospital VBP Program would reduce hospitals' incentive to provide quality care by reducing transparency in public reporting or reduce patients or providers from receiving actionable or meaningful data. As listed in the tables of previously adopted measures for the Hospital IQR Program in sections VIII.A.7. and 8. of the preamble of this final rule, these three measures will remain in the Hospital IQR Program. Therefore, these three measures will continue to be publicly reported under the Hospital IQR Program. In addition, we proposed to remove these measures before they have been incorporated into hospitals' Total Performance Scores (TPS) or public reporting under the Hospital VBP Program. Therefore, removing these measures at this

time will not change performance scoring or public reporting under the Hospital VBP Program.

We continue to believe that using condition-specific payment measures that can be paired directly with clinical quality measures, aligned by comparable populations, performance periods, or risk-adjustment methodologies will help move toward enabling patients, payers, and providers to better assess the overall value of care provided at a hospital. However, we believe retaining MSPB, an overall hospital efficiency measure, while removing these condition-specific payment measures will allow for reduced costs and complexity from the Hospital VBP Program and across the hospital quality programs.

After consideration of the public comments we received, we are finalizing our proposals to remove the AMI Payment, HF Payment, and PN Payment measures from the Hospital VBP Program effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

d. Summary of Previously Adopted Measures for the FY 2020 Program Year

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38244), we finalized the following measure set for the Hospital VBP Program for the FY 2020 program year. We note that we did not propose any changes to this measure set.

<b>Previously Adopted Measures for the FY 2020 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
<b>Person and Community Engagement Domain</b>		
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (including Care Transition Measure)	0166 (0228)

<b>Previously Adopted Measures for the FY 2020 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
<b>Clinical Outcomes Domain*</b>		
MORT-30-AMI	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization	0230
MORT-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF) Hospitalization	0229
MORT-30-PN	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization	0468
THA/TKA	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
<b>Safety Domain</b>		
CAUTI	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CLABSI	National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
MRSA Bacteremia	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure	1716
CDI	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure	1717
PC-01	Elective Delivery	0469
<b>Efficiency and Cost Reduction Domain</b>		
MSPB	Medicare Spending Per Beneficiary (MSPB) – Hospital	2158

\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

e. Summary of Measures for the FY 2021, FY 2022, and FY 2023 Program Years

We refer readers to the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20413 through 20414) for tables showing summaries of measures for the FY 2021, FY 2022, and FY 2023 program years if the measure removals proposed in the proposed rule were finalized. Set out below are summaries of measures for the FY 2021, FY 2022, and FY 2023 program years based on our finalized policies in this final rule.

<b>Summary of Measures for the FY 2021 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
<b>Person and Community Engagement Domain</b>		
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (including Care Transition Measure)	0166 (0228)
<b>Safety Domain*</b>		
CAUTI	National Healthcare Safety Network (NHSN) Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CLABSI	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
MRSA Bacteremia	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	1716
CDI	National Healthcare Safety Network (NHSN) Facility wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	1717
<b>Clinical Outcomes Domain**</b>		
MORT-30-AMI	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization	0230
MORT-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF)	0229

<b>Summary of Measures for the FY 2021 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
	Hospitalization	
MORT-30-PN (updated cohort)	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization	0468
MORT-30-COPD	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	1893
THA/TKA	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
<b>Efficiency and Cost Reduction Domain***</b>		
MSPB	Medicare Spending Per Beneficiary (MSPB) – Hospital	2158

\* As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, or the Safety domain.

\*\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*\* As discussed in sections IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove two measures from the Efficiency and Cost Reduction domain (AMI Payment and HF Payment), which would have entered the program beginning with the FY 2021 program year.

<b>Summary of Measures for the FY 2022 Program Years</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
<b>Person and Community Engagement Domain</b>		
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (including Care Transition Measure)	0166 (0228)
<b>Safety Domain*</b>		
CAUTI	National Healthcare Safety Network (NHSN) Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CLABSI	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection (CLABSI) Outcome Measure	0139

<b>Summary of Measures for the FY 2022 Program Years</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
MRSA Bacteremia	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	1716
CDI	National Healthcare Safety Network (NHSN) Facility wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	1717
<b>Clinical Outcomes Domain**</b>		
MORT-30-AMI	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization	0230
MORT-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF) Hospitalization	0229
MORT-30-PN (updated cohort)	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization	0468
MORT-30-COPD	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	1893
MORT-30-CABG	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery	2558
THA/TKA	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
<b>Efficiency and Cost Reduction Domain***</b>		
MSPB	Medicare Spending Per Beneficiary (MSPB) – Hospital	2158

\* As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, or the Safety domain.

\*\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*\* As discussed in sections IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove two measures from the Efficiency and Cost Reduction domain (AMI Payment and HF Payment), which would have entered the program beginning with the FY 2021 program year, and one measure (PN Payment) which would have entered the program beginning with the FY 2023 program year.

<b>Summary of Measures for the FY 2023 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
<b>Person and Community Engagement Domain</b>		
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (including Care Transition Measure)	0166 (0228)
<b>Safety Domain*</b>		
CAUTI	National Healthcare Safety Network (NHSN) Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CLABSI	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
MRSA Bacteremia	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	1716
CDI	National Healthcare Safety Network (NHSN) Facility wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	1717
PSI 90**	Patient Safety and Adverse Events (Composite)**	0531
<b>Clinical Outcomes Domain***</b>		
MORT-30-AMI	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization	0230
MORT-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF) Hospitalization	0229
MORT-30-PN (updated cohort)	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia	0468

<b>Summary of Measures for the FY 2023 Program Year</b>		
<b>Measure Short Name</b>	<b>Domain/Measure Name</b>	<b>NQF #</b>
	Hospitalization	
MORT-30-COPD	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	1893
MORT-30-CABG	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery	2558
THA/TKA	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
<b>Efficiency and Cost Reduction Domain****</b>		
MSPB	Medicare Spending Per Beneficiary (MSPB) – Hospital	2158

\*As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, MRSA Bacteremia, and PSI 90 measures, or the Safety domain.

\*\* In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38251 through 38256), we finalized adoption of the PSI 90 measure beginning with the FY 2023 program year.

\*\*\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*\*\* As discussed in sections IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove two measures from the Efficiency and Cost Reduction domain (AMI Payment and HF Payment), which would have entered the program beginning with the FY 2021 program year and one measure (PN Payment) which would have entered the program beginning with the FY 2023 program year.

### 3. Accounting for Social Risk Factors in the Hospital VBP Program

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38241 through 38242), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a

disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>243</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social risk factors in CMS value-based purchasing programs.<sup>244</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404), ASPE’s report to Congress found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38241), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>245</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that “measures with a conceptual basis for adjustment generally did not demonstrate an empirical

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<sup>243</sup> See, for example United States Department of Health and Human Services. “Healthy People 2020: Disparities. 2014.” Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

<sup>244</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs.” December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

<sup>245</sup> Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

relationship” between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has extended the socioeconomic status (SES) trial,<sup>246</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018 IPPS/LTCH PPS and CY 2018 OPPS/ASC proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a provider that would also allow for a comparison of those differences, or disparities, across providers. Feedback we received across our quality reporting programs included encouraging CMS: to explore whether factors that could be used to stratify or risk adjust the measures (beyond dual eligibility); to consider the full range of differences in patient backgrounds that might affect outcomes; to explore risk adjustment approaches; and to offer careful consideration of what type of information display would be most useful to the public.

We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care. Commenters encouraged us to stratify measures by other social risk factors such as age,

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<sup>246</sup> Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

income, and educational attainment. With regard to value-based purchasing programs, commenters also cautioned CMS to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to more medically complex patients. Commenters also noted that value-based purchasing program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

As a next step, CMS is considering options to improve health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We also are considering how this work applies to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for more details, where we discuss the potential stratification of certain Hospital Inpatient Quality Reporting Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

Comment: Many commenters recommended that CMS risk-adjust quality and cost measures (including Medicare Spending per Beneficiary - MSPB) for social risk factors because these factors are outside of a provider's control and affect patient outcomes. Several commenters expressed that risk adjustment for social risk factors is critical because public reporting of performance on measures that have not been adjusted

for social risk factors may lead consumers to conclude that providers with a high-risk patient population provide lower quality care. Other commenters noted that public reporting of performance on measures that have not been risk-adjusted may lead policy makers to not address the underlying health disparities. Some commenters recommended specific factors for risk adjustment, including: (1) elements in the ASPE, NQF, and NAM reports; (2) availability of primary care; (3) availability of physical therapy; (4) access to medications; (5) access to appropriate food; (6) access to support services; (7) dual eligibility; (8) income; (9) education; (10) neighborhood deprivation; (11) marital status; (12) access to transportation; (13) homelessness; (14) type of residence; (15) local crime rates; (16) employment status; (17) race/ethnicity; and (18) primary language.

Response: We thank these commenters for their support and will consider these topics in our future analyses of social risk factors.

Comment: Several commenters recommended specific methods of risk adjustment to evaluate performance and calculate payment adjustments, including: (1) risk adjustment at the domain level; (2) risk adjustment at the measure level, including requiring measures developers to build the risk adjustment in from the start through testing; (3) peer grouping of similar facilities, at either the domain or measure level; (4) stratification for public reporting; (5) confidential stratification reports; and (6) reporting hospital-specific disparities.

Response: We thank these commenters for their input and will consider these topics in our future analyses of accounting for social risk factors.

Comment: Several commenters provided recommendations for adopting processes for accounting for social risk factors. Some of these commenters recommended that CMS allow providers time to review and analyze confidential stratified measure results prior to making these data public. These commenters recommended use of the rulemaking process to identify measures for which these reports would be generated, and for which data would be publicized. Other commenters recommended that CMS perform analyses to ensure that providers are not penalized for treating disadvantaged populations. Some commenters observed that there is inconsistent data collection regarding social risk factors and recommended that CMS address this (potentially through a pilot program centered on EHR use for data collection). Some commenters requested that CMS develop and publicize a work plan and timeline for accounting for social risk factors within CMS quality reporting and value-based purchasing programs. Other commenters encouraged CMS to continue monitoring and evaluation to identify potential unintended consequences of quality reporting and value-based purchasing programs on vulnerable populations.

Response: We thank these commenters for their input and will consider these topics in our future analyses of social risk factors.

Comment: One commenter expressed concern that accounting for social risk factors in quality reporting and value-based purchasing programs minimizes incentives to improve outcomes for high-risk patients and therefore does not address the underlying disparities.

Response: We agree with the commenter that accounting for social risk factors should not come at the cost of minimizing incentives to improve outcomes for high-risk patients. We note that among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. These are the objectives that we are seeking to achieve in evaluating methods to account for social risk factors in our programs.

We thank the commenters for their views and will take them into consideration as we continue our work on these issues.

#### 4. Scoring Methodology and Data Requirements

##### a. Changes to the Hospital VBP Program Domains

###### (1) Domain Name Change for the FY 2020 Program Year and Subsequent Years

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49553 through 49554), we renamed the Clinical Care—Outcomes subdomain as the Clinical Care domain beginning with the FY 2018 program year. As discussed in the section I.A.2. of the preamble of this final rule, we strive to have measures in our programs that can drive improvement in patients' health outcomes. We also strive to align quality measurement and value-based payment programs with other national strategies, such as the Meaningful Measures Initiative. As discussed in section IV.I.2.c. of the preamble of this final rule, we believe that one of the primary areas of focus for the Hospital VBP Program should be on measures of clinical outcomes, such as measures of mortality and complications, which address the Meaningful Measures Initiative quality priority of promoting effective

treatment. The Clinical Care domain currently contains these types of measures; therefore, to better align the name of the domain with our priority area of focus, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20415), we proposed to change the domain name from Clinical Care to Clinical Outcomes, beginning with the FY 2020 program year. We believe this proposed domain name better captures our goal of driving improvement in health outcomes and focusing on those outcomes that are most meaningful to patients and their providers.

Comment: One commenter supported CMS' proposal to rename the Clinical Care domain to the Clinical Outcomes domain.

Response: We thank the commenter for its support.

Comment: One commenter expressed concern about the proposed change of the domain name from Clinical Care to Clinical Outcomes due to a perceived lack of outcome measures that meet all the criteria of strong evidence; measurable with a high degree of precision; risk-adjustment methodology including, and accurately measuring the risk factors most strongly associated with the outcome; and having little chance of inducing unintended adverse consequences. The commenter stated the importance of continuing to report good process measures that give hospitals specific data on their performance that is actionable.

Response: As discussed in section IV.I.2.b. of the preambles of the proposed rule and this final rule, we strive to have measures in our programs that can drive improvement in patients' health outcomes. We believe changing the name to the Clinical Outcomes domain better aligns with this priority. While we recognize that the measures

in the Clinical Care (newly finalized as the Clinical Outcomes) domain do not account for every potential risk factor, the measures are risk adjusted and NQF-endorsed. As part of our measure maintenance process, we welcome specific feedback from stakeholders regarding ways to improve risk adjustment for the measures in the hospital programs.

We refer readers to the measure methodology reports available at:

<https://www.qualitynet.org>. Regarding the importance to continue reporting process measures, we agree that some process measures are valuable and may warrant inclusion in CMS' value-based purchasing programs. Currently, there are no process measures in the Clinical Care (Clinical Outcomes) domain; however, we may consider adding additional measures to the domain in the future that can drive improvement in outcomes, including process measures that can be directly linked to outcomes.

After consideration of the public comments we received, we are finalizing our proposal to change the domain name from Clinical Care to Clinical Outcomes, beginning with the FY 2020 program year.

## (2) Maintenance of the Safety Domain for the FY 2021 Program Year and Subsequent Years

We previously adopted five HAI measures and the PC-01 measure for the Safety domain (82 FR 38242 through 38244). We also previously adopted PSI 90 as a measure in the Safety domain beginning with the FY 2023 program year (82 FR 38251 through 38256). However, as discussed in section IV.I.2.c.(1) and (2) of the preambles of the proposed rule and this final rule, above, we proposed to remove the PC-01 measure and the five HAI measures from the Hospital VBP Program beginning with the FY 2021

program year and to remove the PSI 90 measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule, as the PSI 90 measure and all five of the HAI measures will be retained in the HAC Reduction Program. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20415 through 20416), we did not propose any new measures for the Safety domain. In addition, as discussed in section IV.I.2.c. of the preamble of the proposed rule, we stated that by taking a holistic approach to evaluating the appropriateness of the measures used in the three hospital value-based purchasing programs – the Hospital VBP, Hospital Readmissions Reduction, and HAC Reduction Programs – we believed the HAC Reduction Program is the primary part of the quality payment framework that should focus on the safety aspect of care quality for the inpatient hospital setting (Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care). We stated we believe this framework will allow hospitals and patients to continue to obtain meaningful information about hospital performance and incentivize quality improvement while also streamlining the measure sets to reduce the costs of duplicative measures and program complexity.

In the FY 2015 IPPS/LTCH PPS final rule (79 FR 50056) and FY 2016 IPPS/LTCH PPS final rule (80 FR 49546), we noted that hospital acquired condition measures comprise some of the most critical patient safety areas, therefore justifying the use of the measures in more than one program. However, we have also stated that we will monitor the HAC Reduction and Hospital VBP Programs and analyze the impact of our measures selection, including any unintended consequences with having a measure in more than one program, and will revise the measure set in one or both programs if needed

(79 FR 50056). In the proposed rule, we stated that we have continued to receive stakeholder feedback expressing concern about overlapping measures amongst different payment programs, such as the Hospital VBP and HAC Reduction Programs. We further stated that for the Hospital VBP Program, specifically, we believed removing the measures in the Safety domain and retaining them in the HAC Reduction Program would address the concerns expressed by these stakeholders about the costs to hospitals participating in these programs so that the costs of participation do not outweigh the benefits of improving beneficiary care.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20415 through 20416), we proposed to remove the Safety domain from the Hospital VBP Program, beginning with the FY 2021 program year, because there would no longer be any measures in that domain if our measure removal proposals are finalized. We acknowledged that by removing the Safety domain and its measures from the Hospital VBP Program, the overall effect would be to decrease the total percent of hospital payment at risk that is based on performance on these measures (by no longer tying performance on them to Hospital VBP Program reimbursement), and that it might reduce the current incentive for hospitals to perform as well on them. However, we stated we believed hospitals would still be sufficiently incentivized to perform well on the measures even if they are only in one value-based purchasing program, and we intended to monitor the effects of this proposal, if finalized, as the patient safety measures would be maintained in the HAC Reduction Program, validated, and publicly reported on the *Hospital Compare* website.

We also referred readers to section IV.I.4.b.(2) of the preamble of the proposed rule, where we discussed how we considered keeping the Safety domain and the current domain weighting of 25 percent weight for each of the four domains with proportionate reweighting if a hospital has sufficient data on only three domains, which would include retaining in the Hospital VBP Program one or more of the measures in the Safety domain (such as measures which are also used in the HAC Reduction Program). However, based on the considerations discussed above, we decided to propose removal of the Safety domain measures and the Safety domain from the Hospital VBP Program. If our proposals to remove the Safety domain measures (PC-01, the five HAI measures, and PSI 90) were adopted, there would be no measures left in the Safety domain beginning with the FY 2021 program year.

Therefore, we proposed to remove the Safety domain from the Hospital VBP Program beginning with the FY 2021 program year.

Comment: A number of commenters did not support CMS' proposal to remove the Safety domain because they believe its removal would detract from the previously increasing focus on safety within inpatient hospitals. One commenter further stated that safe care is the foundation of high-value care and measuring hospitals' overall quality performance—and financially rewarding them based on this—is incomplete without accounting for the degree to which hospitals are safely providing care.

Response: We agree with commenters that patient safety is a high priority focus of CMS' quality programs and, as part of the Meaningful Measures Initiative, we strive to put patients first. As discussed in sections IV.I.2.c.(1) and (2) of the preamble of this

final rule, above, while we are finalizing removal of the PC-01 measure from the Safety domain, we are not finalizing removal of the five HAI measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, MRSA Bacteremia, CDI) or the removal of the Patient Safety and Adverse Events (Composite) Measure (PSI 90). For this reason, we are not finalizing removal of the Safety domain.

Comment: Many commenters supported CMS' proposal to remove the Safety domain. A few commenters supported CMS' proposal to remove the Safety domain because there would be no measures in the domain. One commenter asserted the measures currently included in the Hospital VBP Program Safety domain are adequately represented in other Medicare quality programs.

Response: We thank the commenters for their input regarding the proposed removal of the Safety domain from the Hospital VBP Program. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, above, we are not finalizing our proposal to remove the five HAI measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, MRSA Bacteremia, CDI) or to remove the Patient Safety and Adverse Events (Composite) Measure (PSI 90). For this reason, we are not finalizing our proposal to remove the Safety domain.

Comment: One commenter recommended that even if the measures currently in the Safety domain are removed, the Safety domain should remain in the Hospital VBP Program and CMS should adopt a number of eCQMs for this domain.

Response: We thank the commenter for their suggestion. As stated above, we are not finalizing our proposal to remove the Safety domain. Regarding the adoption of

eCQMs for the Hospital VBP Program, we continue to evaluate our measure sets and may consider proposing the incorporation of eCQMs into the program in the future.

After consideration of the public comments we received, we are not finalizing our proposal to remove the Safety domain from the Hospital VBP Program beginning with the FY 2021 program year.

b. Maintenance of Existing Domain Weighting for the FY 2021 Program Year and Subsequent Years

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38266), we finalized our proposal to retain the equal weight of 25 percent for each of the four domains in the FY 2020 program year and subsequent years for hospitals that receive a score in all domains. For the FY 2017 program year and subsequent years, we adopted a policy that hospitals must receive domain scores on at least three of four quality domains in order to receive a TPS, and hospitals with sufficient data on only three domains will have their TPSs proportionately reweighted (79 FR 50084 through 50085).

In the FY 2019 IPPS/LTCH PPS proposed rule, we discussed our proposal to remove the Hospital VBP Program Safety domain beginning with the FY 2021 program year in connection with our proposal to remove all of the measures previously adopted for the Safety domain. We stated that if these proposals are adopted, there would be only three domains remaining in the Hospital VBP Program, beginning with the FY 2021 program year – Clinical Outcomes (currently referred to as the Clinical Care domain), Person and Community Engagement, and Efficiency and Cost Reduction. The Clinical Outcomes domain would have five measures of mortality and complications for the FY

2021 program year and 6 measures beginning with the FY 2022 program year, the Person and Community Engagement domain would have the HCAHPS survey with its eight dimensions of patient experience, and the Efficiency and Cost Reduction domain would include only the MSPB measure. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing the removal of the 5 HAI measures or the PSI 90 measure from the Safety domain, and as discussed in section IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing removal of the Safety domain from the Hospital VBP Program. Therefore, we are not finalizing any changes to the Hospital VBP Program domain weighting policies in this final rule, as further discussed below.

In the proposed rule, we discussed that to account for these proposed changes, we assessed the weighting of scores on the three remaining domains in constituting each hospital's TPS. Specifically, we considered: (1) weighting the Clinical Outcomes domain at 50 percent of a hospital's TPS, and to weight the Person and Community Engagement and Efficiency and Cost Reduction at 25 percent each; and (2) weighting all three domains equally, each as one-third ( $1/3$ ) of a hospital's TPS. Because there would have been only three domains if our proposals to remove the Safety domain and all of the Safety domain measures were adopted, we did not propose any changes to the requirement that a hospital must receive domain scores on at least three domains to receive a TPS. Historically, when the Hospital VBP Program had three domains, scores in all three were required to receive a TPS (76 FR 74534; 76 FR 74544). We also discussed in the proposed rule that we considered keeping the current domain weighting (25 percent for each of the four domains – Safety, Clinical Outcomes, Person and

Community Engagement, and Efficiency and Cost Reduction – with proportionate reweighting if a hospital has sufficient data on only three domains), which would require keeping at least one or more of the measures in the Safety domain and the Safety domain itself.

(1) Proposed Domain Weighting with Increased Weight to Clinical Outcomes

For the reasons discussed in the proposed rule, we proposed to weight the domains as follows beginning with the FY 2021 program year:

<b>Proposed Domain Weights for the FY 2021 Program Year and Subsequent Years</b>	
<b>Domain</b>	<b>Weight</b>
Clinical Outcomes*	50 percent
Person and Community Engagement	25 percent
Efficiency and Cost Reduction	25 percent

\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

In the proposed rule, we stated that we believe the proposed domain weighting best aligns with our emphasis on clinical outcomes, which address the Meaningful Measures Initiative quality priority of promoting effective treatment, and would provide a greater weight for the domain with the greatest number of measures (Clinical Outcomes), while providing appropriate weighting to the domains that focus on patient experience and cost reduction commensurate with their continued importance. In proposing to increase the weight of the Clinical Outcomes domain from 25 percent to 50 percent of hospitals’ TPSs, we stated that we took into account that the Clinical Outcomes domain will include five outcome measures for the FY 2021 program year (MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-PN (updated cohort), and THA/TKA) and

six outcome measures for the FY 2022 program year (MORT-30-CABG, MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-PN (updated cohort), and THA/TKA), while the Person and Community Engagement domain includes the HCAHPS survey measure, and the Efficiency and Cost Reduction domain would include only one measure (MSPB) if our proposals to remove the condition-specific payment measures, discussed in section IV.I.2.c.(3) of the preamble of the proposed rule, were adopted.

Under the proposed domain weighting, each measure in the Clinical Outcomes domain (measures of mortality and complications) would have comprised 10 percent of each hospital's TPS for the FY 2021 program year and 8.33 percent for the FY 2022 program year and subsequent years, if a hospital met the case minimum for each measure in the domain, and no more than 25 percent for each measure if a hospital could only meet the minimum two measure scores for the Clinical Outcomes domain. The MSPB measure would continue to be weighted at 25 percent, if our proposals to remove the condition specific payment measures are adopted; and each of the eight HCAHPS dimensions would continue to be weighted at 3.125 percent for a total of 25 percent for the Person and Community Engagement domain. In the proposed rule, we stated that we believed the proposed domain weighting would better balance the contributing weights of each individual measure that would be retained in the Hospital VBP Program (assuming there were no Safety domain measures) compared to the alternative weighting we considered of equal weights (one-third (1/3) for each domain), as discussed in more detail below.

In the proposed rule, we stated that we also believed the proposal to increase the weight of the Clinical Outcomes domain would help address concerns expressed by the Government Accountability Office (GAO) in a June 2017 report.<sup>247</sup> In the report, GAO observed that high scores in the Efficiency and Cost Reduction domain resulted in positive payment adjustments for some hospitals that had composite quality scores below the median (the GAO assessed each hospital's composite quality score as its TPS minus its weighted Efficiency and Cost Reduction domain score). GAO also expressed concern that proportionate reweighting of the Efficiency and Cost Reduction domain (for example, from 25 percent to one-third (1/3) of a hospital's TPS in FY 2016), due to a missing domain score for another domain, amplified the contribution of the Efficiency and Cost Reduction domain to the TPS. GAO recommended that CMS take action to avoid disproportionate impact of the Efficiency and Cost Reduction domain on the TPS, and to change the proportionate reweighting policy so it does not facilitate positive payment adjustments for hospitals with lower quality scores. Other stakeholders and researchers have expressed similar concerns.<sup>248</sup>

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<sup>247</sup> Hospital Value-Based Purchasing: CMS Should Take Steps to Ensure Lower Quality Hospitals Do Not Qualify for Bonuses: Report to Congressional Committees. (GAO Publication No. GAO-17-551) Retrieved from U.S. Government Accountability Office: Available at: <https://www.gao.gov/assets/690/685586.pdf>.

<sup>248</sup> For example, Ryan AM, Krinsky S, Maurer KA, Dimick JB. Changes in Hospital Quality Associated with Hospital Value-Based Purchasing. *N Engl J Med.* 2017 June 15;376(24):2358-2366.

Using actual FY 2018 program data,<sup>249</sup> we analyzed the estimated potential impacts to hospital TPSs and payment adjustment. Based on this analysis, we estimated that with the proposed domain weighting, approximately 200 hospitals with composite quality scores below the median composite quality score for all Hospital VBP Program-eligible hospitals would no longer receive a positive payment adjustment mainly driven by their high performance on the Efficiency and Cost Reduction domain. This represents an approximate 50 percent reduction in the percent of hospitals receiving positive payment adjustments that have composite quality scores below the median (from 21 percent of hospitals receiving payment adjustments to 11 percent). We refer readers to the table in section IV.I.4.b.(3) of the preamble of this final rule, below summarizing the results of this analysis.

In further analyzing the potential impacts of the proposed domain weighting on hospitals' TPSs using actual FY 2018 program data, our analysis showed that, on average, hospitals with large bed size, hospitals in urban areas, teaching hospitals, and safety net status hospitals,<sup>250</sup> which have historically received lower overall TPSs on average (generally due to lower average performance on the Efficiency and Cost Reduction and Patient and Community Engagement domains), moved closer to the

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<sup>249</sup> Only eligible hospitals were included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the State of Maryland) were removed from this analysis.

<sup>250</sup> For purposes of this analysis, "safety net" status is defined as those hospitals with top 10 percentile of Disproportionate Share Hospital (DSH) patient percentage from the FY 2018 IPPS/LTCH PPS final rule impact file, available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>.

average TPS under the proposed domain weighting (generally due to their higher average performance on the Clinical Outcomes domain). With average scores for these types of hospitals moving closer to the average TPS for all hospitals, this would increase their TPSs, on average, and thereby increase their chances for a positive payment adjustment.

On average, hospitals with small bed size, rural hospitals, and non-teaching hospitals, which were historically high scorers on average (generally due to higher average performance on the Efficiency and Cost Reduction and Patient and Community Engagement domains), also moved closer to the average TPS under the proposed domain weighting (generally due to lower average performance on the Clinical Outcomes domain). With average scores for these types of hospitals also moving closer to the average TPS for all hospitals, this would decrease their TPSs, on average, and thereby decrease their chances for a positive payment adjustment. This would also be consistent with our analysis discussed above that the proposed domain weighting would better address GAO's recommendations for the Hospital VBP Program by reducing the percent of hospitals receiving positive payment adjustments that have composite quality scores below the median.

Our analysis also simulated that removing the Safety domain and increasing the weight of the Clinical Outcomes domain would have decreased the slope of the linear exchange function from 2.89 (actual FY 2018) to 2.78 (estimated using actual FY 2018 program data) and would have decreased the percent of hospitals receiving a positive payment adjustment from 57 percent to 45 percent. We believe this is mainly due to hospitals with greater total MS-DRGs payments (such as larger hospitals that generally

have higher average performance on the Clinical Outcomes domain) earning higher TPSs relative to hospitals with smaller total MS-DRGs payments in this estimated budget-neutral program. We refer readers to the tables in section IV.I.4.b.(3) of the preambles of the proposed rule and this final rule summarizing the results of these analyses.

## (2) Alternatives Considered

In the proposed rule, we stated that as an alternative, we also considered weighting each of the three domains equally, meaning that each domain (Clinical Outcomes, Person and Community Engagement, and Efficiency and Cost Reduction) would be weighted as one-third (1/3) of a hospital's TPS, which is similar to the proportionate reweighting policy when a hospital is missing one domain score due to insufficient cases to score enough measures for the domain. Our analysis showed that, on average, hospitals with small bed size, rural hospitals, non-teaching hospitals, and non-safety net status hospitals would earn TPSs relatively closer to or better than historic levels of performance, particularly with increased weighting of the Patient and Community Engagement and Efficiency and Cost Reduction domains from 25 percent each to one-third (1/3) each, domains in which these types of hospitals historically perform better than average compared to large bed size, hospitals in urban areas, teaching hospitals, and safety net status hospitals.<sup>251</sup> In addition, our analysis showed that equally weighting the domains does not address the GAO's concern of positive payment adjustments for hospitals with composite quality scores below the median. Based on our

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<sup>251</sup> For purposes of this analysis, 'safety net' status is defined as those hospitals with top 10 percentile of Disproportionate Share Hospital (DSH) patient percentage from the FY 2018 IPPS final rule impact file, available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>.

analyses, we estimated that approximately 20 percent of hospitals with composite quality scores below the median composite quality score for all Hospital VBP Program-eligible hospitals would receive a positive payment adjustment mainly driven by their high performance on the Efficiency and Cost Reduction domain, if we weighted the domains equally. This is approximately double the number of hospitals that we estimate would receive a positive payment adjustment with composite quality scores below the median as compared to our proposed domain weighting of increasing the Clinical Outcomes domain to 50 percent and keeping the Patient and Community Engagement and Efficiency and Cost Reduction domains at 25 percent each. We refer readers to the tables in section IV.I.4.b.(3) of the preambles of the proposed rule and this final rule summarizing the results of these analyses.

In the proposed rule, we stated that we also considered keeping the Safety domain and the current domain weighting (25 percent weight for each of the four domains with proportionate reweighting if a hospital has sufficient data on only three domains), which would include retaining in the Hospital VBP Program one or more of the measures in the Safety domain (such as measures which are also used in the HAC Reduction Program). As discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposal to remove the PSI 90 and five HAI measures from the Hospital VBP Program.

### (3) Analysis

In the proposed rule, we stated that our priority is to adopt a domain weighting policy that appropriately reflects hospital performance under the Hospital VBP Program,

aligns with CMS policy goals, including the more holistic quality payment program strategy for hospitals discussed in the proposed rule, and continues to incentivize quality improvement. As noted in the proposed rule, to understand the potential impacts of the proposed domain weighting on hospitals’ TPSs, we conducted analyses using FY 2018 program data that estimated the potential impacts of our proposed domain weighting policy to increase the weight of the Clinical Outcomes domain from 25 percent to 50 percent of a hospital’s TPS and an alternative weighting policy we considered of equal weights whereby each domain would constitute one-third (1/3) of a hospital’s TPS. The table below provided an overview of the estimated impact on hospitals’ TPS by certain hospital characteristics and as they would compare to actual FY 2018 TPSs, which included scoring on four domains, including the Safety domain, and applying proportionate reweighting if a hospital had sufficient data on only three domains.

<b>Comparison of Estimated Average TPSs and Unweighted Domain Scores*</b>						
<b>Hospital Characteristic</b>	<b>Actual FY 2018 Average Clinical Care Domain Score</b>	<b>Actual FY 2018 Average Person and Community Engagement Domain Score</b>	<b>Actual FY 2018 Average Efficiency and Cost Reduction Domain Score</b>	<b>Actual FY 2018 Average TPS (4 domains) +</b>	<b>Proposed Increased Weighting of Clinical Care Domain: Estimated Average TPS</b>	<b>Alternative Weighting: Estimated Average TPS</b>
All Hospitals**	43.2	33.5	18.8	37.4	34.6	31.8
Bed Size						
1-99	33.4	46.0	35.7	44.6	37.2	38.4
100-199	42.2	34.5	21.0	39.2	35.0	32.6
200-299	44.5	27.9	12.9	34.4	32.4	28.4
300-399	48.2	27.3	10.0	33.3	33.4	28.5
400+	50.9	26.9	7.6	31.9	34.1	28.5
Geographic Location						
Urban	46.8	30.7	13.7	35.7	34.5	30.4
Rural	33.7	40.5	31.7	41.9	34.9	35.3
Safety Net Status***						
Non-Safety Net	42.7	35.4	19.0	37.9	34.9	32.4
Safety Net	45.1	25.7	18.1	35.6	33.5	29.6
Teaching Status						
Non-Teaching	39.9	36.7	22.9	39.4	34.9	33.2

<b>Comparison of Estimated Average TPSs and Unweighted Domain Scores*</b>						
<b>Hospital Characteristic</b>	<b>Actual FY 2018 Average Clinical Care Domain Score</b>	<b>Actual FY 2018 Average Person and Community Engagement Domain Score</b>	<b>Actual FY 2018 Average Efficiency and Cost Reduction Domain Score</b>	<b>Actual FY 2018 Average TPS (4 domains) +</b>	<b>Proposed Increased Weighting of Clinical Care Domain: Estimated Average TPS</b>	<b>Alternative Weighting: Estimated Average TPS</b>
Teaching	48.7	27.9	11.8	34.1	34.3	29.5

\* Analysis based on FY 2018 Hospital VBP Program data.

\*\* Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the state of Maryland) were removed from this analysis.

+ Based on FY 2018 program year policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

\*\*\* For purposes of this analysis, ‘safety net’ status is defined as those hospitals with top 10 percentile of Disproportionate Share Hospital (DSH) patient percentage from the FY 2018 IPPS/LTCH PPS final rule impact file: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>.

The table below provided a summary of the estimated impacts on average TPSs and payment adjustments for all hospitals,<sup>252</sup> including as they would compare to actual FY 2018 program results under current domain weighting policies.

<b>Summary of Estimated Impacts on Average TPS and Payment Adjustments Using FY 2018 Program Data</b>	<b>Actual (4 domains)<sup>+</sup></b>	<b>Proposed Increased Weight for Clinical Outcomes (3 domains)</b>	<b>Equal Weighting Alternative (3 domains)</b>
Total number of hospitals with a payment adjustment	2,808	2,701	2,701
Number of hospitals receiving a positive payment adjustment (percent)	1,597 (57%)	1,209 (45%)	1,337 (50%)
Average positive payment adjustment percentage	0.60%	0.58%	0.70%
Estimated average positive payment adjustment	\$128,161	\$233,620	\$204,038

<sup>252</sup> Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the State of Maryland) were removed from this analysis.

<b>Summary of Estimated Impacts on Average TPS and Payment Adjustments Using FY 2018 Program Data</b>	<b>Actual (4 domains)<sup>+</sup></b>	<b>Proposed Increased Weight for Clinical Outcomes (3 domains)</b>	<b>Equal Weighting Alternative (3 domains)</b>
Number of hospitals receiving a negative payment adjustment (percent)	1,211 (43%)	1,492 (55%)	1,364 (50%)
Average negative payment adjustment percentage	-0.41%	-0.60%	-0.57%
Estimated average negative payment adjustment	\$169,011	\$189,307	\$200,000
Number of hospitals receiving a positive payment adjustment with a composite quality score* below the median (percent)	341 (21%)	134 (11%)	266 (20%)
Average TPS	37.4	34.6	31.8
Lowest TPS receiving a positive payment adjustment	34.6	35.9	30.9
Slope of the linear exchange function	2.8908851882	2.7849297316	3.2405954322

<sup>+</sup> Based on FY 2018 program year policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

\* “Composite quality score” is defined as a hospital’s TPS minus the hospital’s weighted Efficiency and Cost Reduction domain score.

The estimated total number of hospitals with a payment adjustment was lower under the proposed domain weighting and equal weighting alternative considered (2,701), compared to the current four domain policy (2,808), because under the proposed domain weighting and equal weighting alternative, scores would be required on all three domains (Clinical Outcomes, Person and Community Engagement, and Efficiency and Cost Reduction) to receive a TPS and hence, a payment adjustment, whereas under the current scoring policy, if a hospital has sufficient data on any three of the four domains it can receive a TPS and payment adjustment. For example, under the FY 2018 program year scoring policy, if a hospital did not have sufficient data for a score on the Clinical Outcomes domain, but received a score on the other three domains (Safety, Person and Community Engagement, and Efficiency and Cost Reduction), the hospital could have

had its domain scores proportionately reweighted and received a TPS and payment adjustment, whereas under the proposed domain weighting and equal weighting alternative considered (which do not include the Safety domain and retain the requirement for at least three domain scores to receive a TPS), a hospital that does not have sufficient data for a score on the Clinical Outcomes domain would not receive a TPS or payment adjustment.

We also refer readers to section I.H.6.b. of Appendix A of the proposed rule (83 FR 20620 through 20621) for detailed discussions regarding the estimated impacts of the proposed domain weighting and equal weighting alternative on hospital percentage payment adjustments.

#### (4) Summary

In the proposed rule, we stated that based on our analyses and all of the other considerations discussed above, we believed our proposed domain weighting policy to increase the weight of the Clinical Outcomes domain from 25 percent to 50 percent of a hospital's TPS would best align with the goal of the Hospital VBP Program to make value-based incentive payment adjustments based on hospitals' performance on quality and cost, as well as emphasizes the Meaningful Measures Initiative's focus on high impact areas that are meaningful to patients and providers.

Because we proposed to remove the Safety domain and its measures from the Hospital VBP Program, we considered the two options for weighting the three remaining domains. Increasing the weight of the Clinical Outcomes domain from 25 percent to 50 percent of each hospital's TPS emphasizes our priority and focus on improving patients'

health outcomes, without decreasing the weight of the Efficiency and Cost Reduction or Person and Communities Engagement domains. By contrast, equally weighting each of the three domains at one-third (1/3) of each hospital's TPS would result in the MSPB measure and the HCAHPS survey measure together accounting for two-thirds (2/3) of each hospital's TPS. In the proposed rule, we stated that if our proposal to remove the Safety domain beginning with the FY 2021 program year is adopted, we proposed to weight the three remaining domains as follows: Clinical Outcomes domain – 50 percent; Person and Community Engagement domain – 25 percent; and Efficiency and Cost Reduction domain – 25 percent – beginning with the FY 2021 program year. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing the removal of the 5 HAI measures or the PSI 90 measure from the Safety domain. Therefore, we are not finalizing the removal of the Safety domain from the Hospital VBP Program, as further discussed below.

Comment: A few commenters expressed concern that ongoing changes to the program's scoring and weighting methodology create volatility for providers and do not allow for assessments of hospital performance over time. These commenters recommended that CMS create stability for the program going forward to afford providers a level of predictability and allow for comparison across time.

Response: We appreciate commenters' concerns, and will take this into account as we continue to move forward with the holistic approach to program and measure evaluation across CMS' quality programs. We note that as discussed in section IV.I.2.c.(2) of the preamble of this final rule, above, we are not finalizing the removal of

the 5 HAI measures or the PSI 90 measure from the Safety domain, and as discussed in section IV.I.4.a.(2) of the preamble of this final rule, above, we are not finalizing our proposal to remove the Safety domain, and are therefore not finalizing any changes to the Hospital VBP Program domain weighting policies in this final rule.

We note that in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49568 through 49570), we adopted equal weights of 25 percent for each of the four domains in the FY 2018 program year for hospitals that receive a score in all domains. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57009 through 57010), for the FY 2019 program year, we retained this domain weighting. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38265 through 38266) we finalized our proposal to retain the equal weight of 25 percent for each of the four domains in the FY 2020 program year and subsequent years for hospitals that receive a score in all domains. Because we did not propose to change the domain weighting policies based on consideration of four domains (including retention of the Safety domain) in the FY 2019 IPPS/LTCH PPS proposed rule, and in response to stakeholder concerns of changes to the program's scoring and weighting methodology creating volatility for providers, we are not making changes to the previously finalized equal weight of 25 percent for each of the four domains for hospitals that receive a score in all domains in this final rule.

Comment: Many commenters supported the proposed increased weight to the Clinical Outcomes domain because they believed it would most fairly weight the individual measures within the program, given that the distribution of measures across the three domains. Some commenters recommended delaying implementation of the

proposed domain weighting to allow hospitals time to shift quality improvement focus toward the Clinical Outcomes domain. A number of commenters recommended adopting the alternative domain weighting proposal, where each remaining domain would be weighted equally at one-third of a hospital's TPS, because it would result in a roughly equal distribution of gains and losses across hospitals participating in the Hospital VBP Program and thereby provide hospitals an opportunity to be rewarded for good performance on any one of the measure domains. A few commenters expressed concern about increasing the weight of the Clinical Outcomes domain to 50 percent because the commenters believed the domain does not provide an accurate, comprehensive view of hospital performance. Some commenters did not support adoption of any domain weighting methodology where the Safety domain is removed.

Response: We thank the commenters for their input regarding the proposed domain weighting policies for the Hospital VBP Program. As discussed in section IV.I.4.a.(2) of the preamble of this final rule, above, we are not finalizing our proposal to remove the Safety domain. For this reason, as stated above, we are not finalizing any changes to the current domain weighting in this final rule. However, we will take commenters' feedback into consideration in evaluating any potential future changes to the domain weights.

Comment: Several commenters did not support weighting the Efficiency and Cost Reduction domain at 25 percent because this domain would include only the MSPB measure and therefore recommended reducing its weight. A few commenters

recommended that CMS consider further deemphasizing the weight of the Efficiency and Cost Reduction domain if it continues to observe that hospitals that perform below the national average on the clinical quality measures but perform well on the MSPB measure receive an incentive payment under the proposed approach. Other commenters recommended reducing the weight of the Efficiency and Cost Reduction domain and increasing the weight of the Person and Community Engagement domain.

Response: We thank commenters for their input, and note that the previously finalized weight of the Efficiency and Cost Reduction domain for the FY 2019 and FY 2020 program years, which contains only the MSPB measure, is 25 percent. Because we did not consider a weight for the Efficiency and Cost Reduction domain below 25 percent in our analyses of the domain weighting options discussed in the FY 2019 IPPS/LTCH PPS proposed rule, we are not revising the previously finalized weighting of the Efficiency and Cost Reduction domain in this final rule. However, we will take commenters' recommendations into consideration as we continue evaluating our domain weighting policies, including ways to address concerns about hospitals that perform below the national average on quality measures receiving incentive payments.

Comment: One commenter expressed concern about the weight placed on the Person and Community Engagement domain because it is based on only the HCAHPS patient experience survey measures, which the commenter believes are subjective, can force hospitals to overemphasize experience as opposed to making improvements to clinical care, and could lead to unintended consequences.

Response: We thank the commenter for its input, and will take this recommendation into consideration for future years of the program as we continue evaluating our domain weighting policies. Because we did not consider a weight for the Person and Community Engagement domain below 25 percent in our analyses of the domain weighting options discussed in the FY 2019 IPPS/LTCH PPS proposed rule, we are not revising the previously finalized weighting of the Person and Community Engagement domain in this final rule. As previously finalized, we believe weighting the Person and Community Engagement domain at 25 percent of hospitals' TPSs is appropriate for the domain that measures important elements of the patient's experience of inpatient care. We have adjusted HCAHPS scores for certain patient-level factors that are beyond the hospital's control but which affect survey responses. These factors include patient severity, as indicated by self-reported overall health, and patient's highest level of education, considered the most accurate single measure of socioeconomic status for older adults. We also note that AHRQ carried out a rigorous, scientific process to develop and test the HCAHPS instrument. This process entailed multiple steps, including: a public call for measures; literature reviews; cognitive interviews; consumer focus groups; multiple opportunities for additional stakeholder input; a 3-State pilot test; small-scale field tests; and notice-and-comment rulemaking. The HCAHPS Survey is NQF-endorsed and is currently the only measure in the program which uses information collected directly from patients.

Comment: One commenter specifically recommended further development of the Person and Community Engagement domain and then increasing the weight of that

domain. Another commenter recommended that CMS reevaluate the measures in the program to encompass a more holistic view of quality, including improving patient's quality of life, because the commenter believed that while experience and cost are important measures of quality, they are not necessarily equivalent to high quality. A third commenter recommended that if measures are added to or removed from these domains, CMS should examine the weighting and make appropriate adjustments.

Response: We thank the commenters for their recommendations, and will take these recommendations into consideration for future years of the program.

After consideration of the public comments we received, we are not finalizing our proposal to use three domains, beginning with the FY 2021 program year, with the Clinical Outcomes domain weighted at 50 percent; the Person and Community Engagement domain weighted at 25 percent; and the Efficiency and Cost Reduction domain weighted at 25 percent. We are also not finalizing our proposal to remove the Safety domain because we are not removing all of the measures in that domain. Therefore, in accordance with our current policy, we will maintain four domains in the Hospital VBP Program, each with a weight of 25 percent, for hospitals that receive a score in all domains, and hospitals with sufficient data on only three domains will have their TPSs proportionately reweighted.

c. Minimum Numbers of Measures for Hospital VBP Program Domains for the FY 2021 Program Year and Subsequent Years

Based on previously finalized policies (82 FR 38266), for a hospital to receive a domain score for the FY 2021 program year and subsequent years:

- A hospital must report a minimum number of 100 completed HCAHPS surveys for a hospital to receive a Person and Community Engagement domain score.
- A hospital must receive a minimum of two measure scores within the Clinical Outcomes domain (currently referred to as the Clinical Care domain).
- A hospital must receive a minimum of one measure score within the Efficiency and Cost Reduction domain.

As discussed in section IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposal to remove the Safety domain from the Hospital VBP Program beginning with the FY 2021 program year. Therefore, based on previously finalized policies (82 FR 38266), we are clarifying in this final rule that additionally:

- A hospital must receive a minimum of two measure scores within the Safety domain.

We note that we are finalizing our proposal to remove the condition-specific payment measures from the Hospital VBP Program and, therefore, a hospital's Efficiency and Cost Reduction domain score would be based solely on its MSPB measure score. In the proposed rule (83 FR 20420), we did not propose any changes to this policy.

#### d. Minimum Numbers of Cases for Hospital VBP Program Measures for the FY 2021 Program Year and Subsequent Years

##### (1) Background

Section 1886(o)(1)(C)(ii)(IV) of the Act requires the Secretary to exclude for the fiscal year hospitals that do not report a minimum number (as determined by the Secretary) of cases for the measures that apply to the hospital for the performance period

for the fiscal year. For additional discussion of the previously finalized minimum numbers of cases for measures under the Hospital VBP Program, we refer readers to the Hospital Inpatient VBP Program final rule (76 FR 26527 through 26531); the CY 2012 OPPS/ASC final rule (76 FR 74532 through 74534); the FY 2013 IPPS/LTCH PPS final rule (77 FR 53608 through 53609); the FY 2015 IPPS/LTCH PPS final rule (79 FR 50085); the FY 2016 IPPS/LTCH PPS final rule (80 FR 49570); the FY 2017 IPPS/LTCH PPS final rule (81 FR 57011); and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38266 through 38267).

## (2) Clinical Care Domain/Clinical Outcomes Domain

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53608 through 53609), we adopted a minimum number of 25 cases for the MORT-30-AMI, MORT-30-HF, and MORT-30-PN measures. We adopted the same 25-case minimum for the MORT-30-COPD measure in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49570), and for the MORT-30-CABG, MORT-30-PN (updated cohort), and THA/TKA measures in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57011).

In the proposed rule (83 FR 20420), we did not propose any changes to these policies.

## (3) Person and Community Engagement Domain

In the Hospital Inpatient VBP Program final rule (76 FR 26527 through 26531), we adopted a minimum number of 100 completed HCAHPS surveys for a hospital to receive a score on the HCAHPS measure.

In the proposed rule (83 FR 20420), we did not propose any changes to this policy.

#### (4) Efficiency and Cost Reduction Domain

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53609 through 53610), we adopted a minimum of 25 cases in order to receive a score for the MSPB measure. In the FY 2015 IPPS/LTCH PPS final rule (79 FR 50085 through 50086), we retained the same MSPB measure case minimum for the FY 2016 program year and subsequent years. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38267), we adopted a policy that hospitals must report a minimum number of 25 cases per measure in order to receive a measure score for the condition-specific payment measures (namely, the AMI Payment, HF Payment, and PN Payment measures), for the FY 2021 program year, FY 2022 program year, and subsequent years.

In the proposed rule (83 FR 20420), we did not propose any changes to these policies for the MSPB measure; however, as discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposals to remove the three condition-specific payment measures (AMI Payment, HF Payment, and PN Payment) from the Hospital VBP Program effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

#### (5) Summary of Previously Adopted Minimum Numbers of Cases for the FY 2021 Program Year and Subsequent Years

The previously adopted minimum numbers of cases for these measures are set forth in the table below.

As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposals to remove the HAI measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia) beginning with the FY 2021 program year, or to remove the PSI 90 measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. Therefore, previously adopted minimum numbers of cases for those measures are also set forth in the table below. In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53608 through 53609), we adopted a minimum of one predicted infection for NHSN-based surveillance measures (that is, the CAUTI, CLABSI, CDI, MRSA, and SSI measures) based on CDC's minimum case criteria. In the FY 2015 IPPS/LTCH PPS final rule (79 FR 50085), we adopted this case minimum for the NHSN-based surveillance measures for the FY 2016 Hospital VBP Program and subsequent years. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38267), beginning with the FY 2023 program year, we adopted a policy that hospitals must report a minimum of three eligible cases on any one underlying indicator during the baseline period in order to receive an improvement score and three eligible cases on any one underlying indicator during performance period in order to receive an achievement score on the Patient Safety and Adverse Events (Composite) (PSI 90) measure. For the purposes of the PSI 90 measure, a case is "eligible" for a given indicator if it meets the criterion for inclusion in the indicator measure population.

<b>Previously Adopted Minimum Case Number Requirements for the FY 2021 Program Year and Subsequent Years</b>	
<b>Measure Short Name</b>	<b>Minimum Number of Cases</b>
<b>Person and Community Engagement Domain</b>	
HCAHPS	Hospitals must report a minimum number of 100 completed HCAHPS surveys.
<b>Clinical Outcomes Domain*</b>	
MORT-30-AMI	Hospitals must report a minimum number of 25 cases.
MORT-30-HF	Hospitals must report a minimum number of 25 cases.
MORT-30-PN (updated cohort)	Hospitals must report a minimum number of 25 cases.
MORT-30-COPD	Hospitals must report a minimum number of 25 cases.
MORT-30-CABG	Hospitals must report a minimum number of 25 cases.
THA/TKA	Hospitals must report a minimum number of 25 cases.
<b>Safety Domain</b>	
CAUTI	Hospitals have a minimum of 1.000 predicted infections as calculated by the CDC.
CLABSI	Hospitals have a minimum of 1.000 predicted infections as calculated by the CDC.
Colon and Abdominal Hysterectomy SSI	Hospitals have a minimum of 1.000 predicted infections as calculated by the CDC.
MRSA Bacteremia	Hospitals have a minimum of 1.000 predicted infections as calculated by the CDC.
CDI	Hospitals have a minimum of 1.000 predicted infections as calculated by the CDC.
Patient Safety and Adverse Events (Composite) <sup>#</sup>	Hospitals must report a minimum of three eligible cases on any one underlying indicator.
<b>Efficiency and Cost Reduction Domain</b>	
MSPB	Hospitals must report a minimum number of 25 cases.

\* In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize our proposal to change the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

<sup>#</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38242 through 38244, 38251 through 38256), we removed the former PSI 90 measure beginning with the FY 2019 program year. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38251 through 38256), we adopted the Patient Safety and Adverse Events (Composite) (PSI 90) measure beginning with the FY 2023 program year.

## 5. Previously Adopted Baseline and Performance Periods

### a. Background

Section 1886(o)(4) of the Act requires the Secretary to establish a performance period for the Hospital VBP Program that begins and ends prior to the beginning of such fiscal year. We refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 56998 through 57003) for baseline and performance periods that we have adopted for the FY 2019, FY 2020, FY 2021, and FY 2022 program years. In the same rule, we finalized a schedule for all future baseline and performance periods for previously adopted measures. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38256 through 38261) for additional baseline and performance periods that we have adopted for the FY 2022, FY 2023, and subsequent program years.

### b. Person and Community Engagement Domain

Since the FY 2015 program year, we have adopted a 12-month baseline period and 12-month performance period for measures in the Person and Community Engagement domain (previously referred to as the Patient- and Caregiver-Centered Experience of Care/Care Coordination domain) (77 FR 53598; 78 FR 50692; 79 FR 50072; 80 FR 49561). In the FY 2017 IPPS/LTCH PPS final rule (81 FR 56998), we finalized our proposal to adopt a 12-month performance period for the Person and Community Engagement domain that runs on the calendar year 2 years prior to the applicable program year and a 12-month baseline period that runs on the calendar year 4 years prior to the applicable program year, for the FY 2019 program year and subsequent years.

In the proposed rule (83 FR 20421), we did not propose any changes to these policies.

c. Efficiency and Cost Reduction Domain

Since the FY 2016 program year, we have adopted a 12-month baseline period and 12-month performance period for the MSPB measure in the Efficiency and Cost Reduction domain (78 FR 50692; 79 FR 50072; 80 FR 49562). In the FY 2017 IPPS/LTCH PPS final rule, we finalized our proposal to adopt a 12-month performance period for the MSPB measure that runs on the calendar year 2 years prior to the applicable program year and a 12-month baseline period that runs on the calendar year 4 years prior to the applicable program year for the FY 2019 program year and subsequent years (81 FR 56998).

In the proposed rule (83 FR 20421), we did not propose any changes to these policies.

d. Clinical Care Domain/Clinical Outcomes Domain

For the FY 2020 and FY 2021 program years, we adopted a 36-month baseline period and 36-month performance period for measures in the Clinical Outcomes domain (currently referred to as the Clinical Care domain) (78 FR 50692 through 50694; 79 FR 50073; 80 FR 49563).<sup>253</sup> In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57000), we finalized our proposal to adopt a 36-month performance period and 36-month baseline period for the FY 2022 program year for each of the previously

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<sup>253</sup> The THA/TKA measure was added for the FY 2019 program year with a 36-month baseline period and a 24-month performance period (79 FR 50072), but we have since adopted 36-month baseline and performance periods for the FY 2021 program year (80 FR 49563).

finalized measures in the Clinical Outcomes domain—that is, the MORT-30-AMI, MORT-30-HF, MORT-30-COPD, THA/TKA, and MORT-30-CABG measures. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57001), we also adopted a 22-month performance period for the MORT-30-PN (updated cohort) measure and a 36-month baseline period for the FY 2021 program year. In the same final rule, we adopted a 34-month performance period and 36-month baseline period for the MORT-30-PN (updated cohort) measure for the FY 2022 program year.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38259), we adopted a 36-month performance period and 36-month baseline period for the MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-CABG, MORT-30-PN (updated cohort), and THA/TKA measures for the FY 2023 program year and subsequent years. Specifically, for the mortality measures (MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-CABG, and MORT-30-PN (updated cohort)), the performance period runs for 36 months from July 1, five years prior to the applicable fiscal program year, to June 30, two years prior to the applicable fiscal program year, and the baseline period runs for 36 months from July 1, ten years prior to the applicable fiscal program year, to June 30, seven years prior to the applicable fiscal program year. For the THA/TKA measure, the performance period runs for 36 months from April 1, five years prior to the applicable fiscal program year, to March 31, two years prior to the applicable fiscal program year, and the baseline period runs for 36 months from April 1, ten years prior to the applicable fiscal program year, to March 31, seven years prior to the applicable fiscal program year.

In the proposed rule (83 FR 20421), we did not propose any changes to the length of these performance or baseline periods.

e. Safety Domain

In the FY 2017 IPPS/LTCH PPS final rule, we finalized our proposal to adopt a performance period for all measures in the Safety domain—with the exception of the PSI 90 measure—that runs on the calendar year two years prior to the applicable program year and a baseline period that runs on the calendar year 4 years prior to the applicable program year for the FY 2019 program year and subsequent program years (81 FR 57000). In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38242 through 38244, 38251 through 38256), we removed the former PSI 90 measure beginning with the FY 2019 program year, and adopted the Patient Safety and Adverse Events (Composite) (PSI 90) measure beginning with the FY 2023 program year, along with baseline and performance periods for the measure (82 FR 38258 through 38259).

As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposals to remove the HAI measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia) beginning with the FY 2021 program year, or to remove the PSI 90 measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

f. Summary of Previously Adopted Baseline and Performance Periods for the FY 2020 through FY 2024 Program Years

The tables below summarize the baseline and performance periods that we have previously adopted. In the FY 2019 IPPS/LTCH PPS proposed rule, we did not summarize the previously adopted baseline and performance periods for the Safety domain or its measures for the FY 2021 program year or subsequent years due to our proposal to remove the Safety domain and its measures. However, because we are not finalizing our proposals to remove the five HAI measures, the PSI 90 measure, or the Safety domain as a whole, we are providing the previously adopted baseline and performance periods for those measures in this final rule, below.

<b>Previously Adopted Baseline and Performance Periods for the FY 2020 Program Year: Person and Community Engagement; Clinical Outcomes; Safety; and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
Person and Community Engagement <ul style="list-style-type: none"> <li>• HCAHPS</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2016 – December 31, 2016</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2018 – December 31, 2018</li> </ul>
Clinical Outcomes* <ul style="list-style-type: none"> <li>• Mortality (MORT-30-AMI, MORT-30-HF, MORT-30-PN)</li> <li>• THA/TKA</li> </ul>	<ul style="list-style-type: none"> <li>• July 1, 2010 – June 30, 2013</li> <li>• July 1, 2010 – June 30, 2013</li> </ul>	<ul style="list-style-type: none"> <li>• July 1, 2015 – June 30, 2018</li> <li>• July 1, 2015 – June 30, 2018</li> </ul>
Safety <ul style="list-style-type: none"> <li>• PC-01 and NHSN measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, MRSA Bacteremia)</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2016 – December 31, 2016</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2018 – December 31, 2018</li> </ul>
Efficiency and Cost Reduction <ul style="list-style-type: none"> <li>• MSPB</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2016 – December 31, 2016</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2018 – December 31, 2018</li> </ul>

\* In section IV.I.4.a.(1) of the preamble of this final rule we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

<b>Previously Adopted Baseline and Performance Periods for the FY 2021 Program Year: Person and Community Engagement; Clinical Outcomes;* Safety;** and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
Person and Community Engagement ● HCAHPS	● January 1, 2017 – December 31, 2017	● January 1, 2019 – December 31, 2019
Clinical Outcomes* ● Mortality (MORT-30-AMI, MORT-30-HF, MORT-30-COPD) ● MORT-30-PN (updated cohort) ● THA/TKA	● July 1, 2011 – June 30, 2014 ● July 1, 2012 – June 30, 2015 ● April 1, 2011 – March 31, 2014	● July 1, 2016 – June 30, 2019 ● September 1, 2017 – June 30, 2019 ● April 1, 2016 – March 31, 2019
Safety** ● NHSN measures (CAUTI, CLABSI, SSI, CDI, MRSA)	● January 1, 2017 – December 31, 2017	● January 1, 2019 – December 31, 2019
Efficiency and Cost Reduction*** ● MSPB	● January 1, 2017 – December 31, 2017	● January 1, 2019 – December 31, 2019

\* In section IV.I.4.a.(1) of the preamble of this final rule we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, or the Safety domain.

\*\*\* As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove the AMI Payment and HF Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

<b>Previously Adopted Baseline and Performance Periods for the FY 2022 Program Year: Person and Community Engagement; Clinical Outcomes;* Safety;** and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
Person and Community Engagement ● HCAHPS	● January 1, 2018 – December 31, 2018	● January 1, 2020 – December 31, 2020
Clinical Outcomes* ● Mortality (MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-CABG) ● MORT-30-PN (updated cohort) ● THA/TKA	● July 1, 2012 – June 30, 2015 ● July 1, 2012 – June 30, 2015 ● April 1, 2012 – March 31, 2015	● July 1, 2017 – June 30, 2020 ● September 1, 2017 – June 30, 2020 ● April 1, 2017 – March 31, 2020
Safety** ● NHSN measures (CAUTI, CLABSI, SSI, CDI, MRSA)	● January 1, 2018 – December 31, 2018	● January 1, 2020 – December 31, 2020
Efficiency and Cost Reduction*** ● MSPB	● January 1, 2018 – December 31, 2018	● January 1, 2020 – December 31, 2020

\* In section IV.I.4.a.(1) of the preamble of this final rule we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, or the Safety domain.

\*\*\* As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove the AMI Payment, HF Payment, and PN Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

<b>Previously Adopted Baseline and Performance Periods for the FY 2023 Program Year: Person and Community Engagement; Clinical Outcomes*; Safety**; and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
Person and Community Engagement ● HCAHPS	● January 1, 2019 – December 31, 2019	● January 1, 2021 – December 31, 2021

<b>Previously Adopted Baseline and Performance Periods for the FY 2023 Program Year: Person and Community Engagement; Clinical Outcomes*; Safety**; and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
<b>Clinical Outcomes*</b> <ul style="list-style-type: none"> <li>● Mortality (MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-CABG, MORT-30-PN (updated cohort))</li> <li>● THA/TKA</li> </ul>	<ul style="list-style-type: none"> <li>● July 1, 2013 – June 30, 2016</li> <li>● April 1, 2013 – March 31, 2016</li> </ul>	<ul style="list-style-type: none"> <li>● July 1, 2018 – June 30, 2021</li> <li>● April 1, 2018 – March 31, 2021</li> </ul>
<b>Safety</b> <ul style="list-style-type: none"> <li>● NHSN measures (CAUTI, CLABSI, SSI, CDI, MRSA)</li> <li>● Patient Safety and Adverse Events (Composite) (PSI 90)</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2019 – December 31, 2019</li> <li>● October 1, 2015 – June 30, 2017</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2021 – December 31, 2021</li> <li>● July 1, 2019 – June 30, 2021</li> </ul>
<b>Efficiency and Cost Reduction***</b> <ul style="list-style-type: none"> <li>● MSPB</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2019 – December 31, 2019</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2021 – December 31, 2021</li> </ul>

\* In section IV.I.4.a.(1) of the preamble of this final rule we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, PSI 90 measure, or the Safety domain.

\*\*\* As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove AMI Payment, HF Payment, and PN Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

<b>Previously Adopted Baseline and Performance Periods for the FY 2024 Program Year: Person and Community Engagement; Clinical Outcomes;* Safety;** and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
<b>Person and Community Engagement</b> <ul style="list-style-type: none"> <li>● HCAHPS</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2020 – December 31, 2020</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2022 – December 31, 2022</li> </ul>

<b>Previously Adopted Baseline and Performance Periods for the FY 2024 Program Year: Person and Community Engagement; Clinical Outcomes;* Safety;** and Efficiency and Cost Reduction Domains</b>		
<b>Domain</b>	<b>Baseline Period</b>	<b>Performance Period</b>
<b>Clinical Outcomes*</b> <ul style="list-style-type: none"> <li>● Mortality (MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-CABG, MORT-30-PN (updated cohort))</li> <li>● THA/TKA</li> </ul>	<ul style="list-style-type: none"> <li>● July 1, 2014 – June 30, 2017</li> <li>● April 1, 2014 – March 31, 2017</li> </ul>	<ul style="list-style-type: none"> <li>● July 1, 2019 – June 30, 2022</li> <li>● April 1, 2019 – March 31, 2022</li> </ul>
<b>Safety**</b> <ul style="list-style-type: none"> <li>● NHSN measures (CAUTI, CLABSI, SSI, CDI, MRSA)</li> <li>● Patient Safety and Adverse Events (Composite) (PSI 90)</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2020 – December 31, 2020</li> <li>● July 1, 2016 – June 30, 2018</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2022 – December 31, 2022</li> <li>● July 1, 2020 – June 30, 2022</li> </ul>
<b>Efficiency and Cost Reduction***</b> <ul style="list-style-type: none"> <li>● MSPB</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2020 – December 31, 2020</li> </ul>	<ul style="list-style-type: none"> <li>● January 1, 2022 – December 31, 2022</li> </ul>

\* In section IV.I.4.a.(1) of the preamble of the proposed this final rule we discuss our decision, to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\*\*As discussed in section IV.I.2.c.(1) of the preamble of this final rule, we are finalizing our proposal to remove the PC-01 measure from the Hospital VBP Program beginning with the FY 2021 program year. However, as discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of the preamble of this final rule, we are not finalizing our proposals to remove CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, CDI, and MRSA Bacteremia measures, PSI 90 measure, or the Safety domain.

\*\*\* As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove AMI Payment, HF Payment, and PN Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

## 6. Previously Adopted and Newly Finalized Performance Standards for the Hospital VBP Program

### a. Background

Section 1886(o)(3)(A) of the Act requires the Secretary to establish performance standards for the measures selected under the Hospital VBP Program for a performance period for the applicable fiscal year. The performance standards must include levels of

achievement and improvement, as required by section 1886(o)(3)(B) of the Act, and must be established no later than 60 days before the beginning of the performance period for the fiscal year involved, as required by section 1886(o)(3)(C) of the Act. We refer readers to the Hospital Inpatient VBP Program final rule (76 FR 26511 through 26513) for further discussion of achievement and improvement standards under the Hospital VBP Program.

In addition, when establishing the performance standards, section 1886(o)(3)(D) of the Act requires the Secretary to consider appropriate factors, such as: (1) practical experience with the measures, including whether a significant proportion of hospitals failed to meet the performance standard during previous performance periods; (2) historical performance standards; (3) improvement rates; and (4) the opportunity for continued improvement.

We refer readers to the FY 2013, FY 2014, and FY 2015 IPPS/LTCH PPS final rules (77 FR 53599 through 53605; 78 FR 50694 through 50699; and 79 FR 50080 through 50081, respectively) for a more detailed discussion of the general scoring methodology used in the Hospital VBP Program.

b. Previously Adopted and Newly Finalized Performance Standards for the FY 2021 Program Year

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38263), we summarized the previously adopted performance standards for the FY 2021 program year for the Clinical Care domain (proposed Clinical Outcome domain) measures (MORT-30-HF, MORT-30-AMI, MORT-30-COPD, THA/TKA, and MORT-30-PN (updated cohort))

and the Efficiency and Cost Reduction domain measure (MSPB). We note that the performance standards for the MSPB measure are based on performance period data; therefore, we are unable to provide numerical equivalents for the standards at this time. The previously adopted performance standards for the measures in the Clinical Care (proposed Clinical Outcome domain) and Efficiency and Cost Reduction domains for the FY 2021 program year are set out in the tables below. As discussed in sections IV.I.2.c.(2) and IV.I.4.a.(2) of this final rule, we are not finalizing our proposals to remove the five HAI measures, the PSI 90 measure, or the Safety domain from the Hospital VBP Program; therefore, below we are displaying newly finalized performance standards for the following Safety domain measures for the FY 2021 program year: CAUTI, CLABSI, CDI, MRSA Bacteremia, Colon and Abdominal Hysterectomy SSI.

<b>Previously Adopted and Newly Displayed Performance Standards for the FY 2021 Program Year: Safety, Clinical Outcomes,<sup>^</sup> and Efficiency and Cost Reduction Domains<sup>#</sup></b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Safety Domain</b>		
CAUTI	0.774	0
CLABSI	0.687	0
CDI	0.748	0.067
MRSA Bacteremia	0.763	0
Colon and Abdominal Hysterectomy SSI	● 0.754 ● 0.726	● 0 ● 0
<b>Clinical Outcomes Domain<sup>^*</sup></b>		
MORT-30-AMI	0.860355	0.879714
MORT-30-HF	0.883803	0.906144
MORT-30-PN (updated cohort)	0.836122	0.870506
MORT-30-COPD	0.923253	0.938664
THA/TKA**	0.031157	0.022418

<b>Previously Adopted and Newly Displayed Performance Standards for the FY 2021 Program Year: Safety, Clinical Outcomes,<sup>^</sup> and Efficiency and Cost Reduction Domains<sup>#</sup></b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Efficiency and Cost Reduction Domain</b>		
MSPB**	Median Medicare Spending per Beneficiary ratio across all hospitals during the performance period.	Mean of the lowest decile Medicare Spending per Beneficiary ratios across all hospitals during the performance period.

<sup>^</sup> In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize changing the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

<sup>#</sup> As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove the AMI Payment and HF Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. As a result, the previously finalized performance standards for those measures are not included in this table.

\* We note that the mortality measures in the Hospital VBP Program use survival rates rather than mortality rates; as a result, higher values indicate better performance on these measures.

\*\* Lower values represent better performance.

The eight dimensions of the HCAHPS measure are calculated to generate the HCAHPS Base Score. For each of the eight dimensions, Achievement Points (0–10 points) and Improvement Points (0-9 points) are calculated, the larger of which is then summed across the eight dimensions to create the HCAHPS Base Score (0-80 points). Each of the eight dimensions is of equal weight, thus the HCAHPS Base Score ranges from 0 to 80 points. HCAHPS Consistency Points are then calculated, which range from 0 to 20 points. The Consistency Points take into consideration the scores of all eight Person and Community Engagement dimensions. The final element of the scoring formula is the summation of the HCAHPS Base Score and the HCAHPS Consistency Points, which results in the Person and Community Engagement Domain score that ranges from 0 to 100 points.

In accordance with our finalized methodology for calculating performance standards (discussed more fully in the Hospital Inpatient VBP Program final rule (76 FR 26511 through 26513)), we proposed to adopt performance standards for the FY 2021 program year for the Person and Community Engagement domain. In the proposed rule, we noted that the numerical values for the proposed performance standards displayed in the proposed rule represent estimates based on the most recently available data, and that we intended to update the numerical values in the FY 2019 IPPS/LTCH PPS final rule.

Although we invited public comment on the proposed performance standards for the eight HCAHPS survey dimensions, we did not receive any public comments on the proposed performance standards, and are adopting the performance standards listed in the table below. These HCAHPS survey dimension performance standards in the table below have been updated from the FY 2018 IPPS/LTCH PPS proposed rule and represent the most recently available data.

<b>Newly Finalized Performance Standards for the FY 2021 Program Year: Person and Community Engagement Domain<sup>±</sup></b>			
<b>HCAHPS Survey Dimension</b>	<b>Floor (percent)</b>	<b>Achievement Threshold (percent)</b>	<b>Benchmark (percent)</b>
Communication with Nurses	42.06	79.06	87.36
Communication with Doctors	41.99	79.91	88.10
Responsiveness of Hospital Staff	33.89	65.77	81.00
Communication about Medicines	33.19	63.83	74.75
Hospital Cleanliness & Quietness	30.60	65.61	79.58
Discharge Information	66.94	87.38	92.17
Care Transition	6.53	51.87	63.32

<b>Newly Finalized Performance Standards for the FY 2021 Program Year: Person and Community Engagement Domain<sup>±</sup></b>			
<b>HCAHPS Survey Dimension</b>	<b>Floor (percent)</b>	<b>Achievement Threshold (percent)</b>	<b>Benchmark (percent)</b>
Overall Rating of Hospital	34.70	71.80	85.67

<sup>±</sup> The performance standards displayed in this table were calculated using four quarters of CY 2017 data in this final rule.

c. Previously Adopted Performance Standards for Certain Measures for the FY 2022 Program Year

We have adopted certain measures for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) and the Efficiency and Cost Reduction domain for future program years in order to ensure that we can adopt baseline and performance periods of sufficient length for performance scoring purposes. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57009), we adopted performance standards for the FY 2022 program year for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) measures (THA/TKA, MORT-30-HF, MORT-30-AMI, MORT-30-PN (updated cohort), MORT-30-COPD, and MORT-30-CABG) and the Efficiency and Cost Reduction domain measure (MSPB). We note that the performance standards for the MSPB measure are based on performance period data; therefore, we are unable to provide numerical equivalents for the standards at this time. The previously adopted performance standards for these measures are set out in the table below.

<b>Previously Adopted Performance Standards for the FY 2022 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Clinical Outcomes Domain<sup>^*</sup></b>		
MORT-30-AMI	0.861793	0.881305
MORT-30-HF	0.879869	0.903608

<b>Previously Adopted Performance Standards for the FY 2022 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
MORT-30-PN (updated cohort)	0.836122	0.870506
MORT-30-COPD	0.920058	0.936962
MORT-30-CABG <sup>†</sup>	0.968210	0.979000
THA/TKA <sup>**</sup>	0.029833	0.021493
<b>Efficiency and Cost Reduction Domain<sup>#</sup></b>		
MSPB <sup>**</sup>	Median Medicare Spending per Beneficiary ratio across all hospitals during the performance period.	Mean of the lowest decile Medicare Spending per Beneficiary ratios across all hospitals during the performance period.

<sup>^</sup> In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize our proposal to change the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

<sup>†</sup> After publication of the FY 2017 IPPS/LTCH PPS final rule, we determined there was a display error in the performance standards for this measure. Specifically, the Achievement Threshold and Benchmark values, while accurate, were presented in the wrong categories. We corrected this issue in the FY 2018 IPPS/LTCH PPS final rule, and the correct performance standards are displayed here in the table above.

\* The mortality measures in the Hospital VBP Program use survival rates rather than mortality rates; as a result, higher values indicate better performance on these measures.

\*\* Lower values represent better performance.

<sup>#</sup> As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove the AMI Payment, HF Payment, and PN Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. As a result, the previously finalized performance standards for those three measures are not included in this table.

d. Previously Adopted and Newly Displayed Finalized Performance Standards for Certain Measures for the FY 2023 Program Year

In the proposed rule (83 FR 20425 through 20426), we noted that we have adopted certain measures for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) and the Efficiency and Cost Reduction domain for future program years in order to ensure that we can adopt baseline and performance periods of sufficient length for performance scoring purposes. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38264 through 38265), we adopted the following performance standards for the

FY 2023 program year for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) measures (THA/TKA, MORT-30-AMI, MORT-30-HF, MORT-30-PN (updated cohort), MORT-30-COPD, and MORT-30-CABG) and for the Efficiency and Cost Reduction domain measure (MSPB). In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38264), we stated our intent to propose performance standards for the PSI 90 measure in this year’s rulemaking.

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20425 through 20426), we proposed to remove the PSI 90 measure from the Hospital VBP Program effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. For this reason, we did not include proposed performance standards for this measure in the proposed rule. However, as discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposal to remove the PSI 90 measure from the Hospital VBP Program. Therefore, we are displaying newly finalized performance standards for the PSI 90 measure for the FY 2023 program year, in the table below. We note that the performance standards for the MSPB measure are based on performance period data; therefore, we are unable to provide numerical equivalents for the standards at this time. The previously adopted and newly displayed performance standards for the other measures are also set out in the table below.

<b>Previously Adopted and Newly Displayed Finalized Performance Standards for the FY 2023 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Safety Domain</b>		
PSI 90**	0.972658	0.760882

<b>Previously Adopted and Newly Displayed Finalized Performance Standards for the FY 2023 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Safety Domain</b>		
PSI 90**	0.972658	0.760882
<b>Clinical Outcomes Domain<sup>^*</sup></b>		
MORT-30-AMI	0.866548	0.885499
MORT-30-HF	0.881939	0.906798
MORT-30-PN (updated cohort)	0.840138	0.871741
MORT-30-COPD	0.919769	0.936349
MORT-30-CABG	0.968747	0.979620
THA/TKA**	0.027428	0.019779
<b>Efficiency and Cost Reduction Domain<sup>#</sup></b>		
MSPB**	Median Medicare Spending per Beneficiary ratio across all hospitals during the performance period.	Mean of the lowest decile Medicare Spending per Beneficiary ratios across all hospitals during the performance period.

<sup>^</sup> In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize our proposal to change the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\* The mortality measures in the Hospital VBP Program use survival rates rather than mortality rates; as a result, higher values indicate better performance on these measures.

\*\* Lower values represent better performance.

<sup>#</sup> As discussed in section IV.I.2.c.(3) of the preamble of this final rule, we are finalizing our proposal to remove the AMI Payment, HF Payment, and PN Payment measures effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. As a result, the previously finalized performance standards for those three measures are not included in this table.

e. Performance Standards for Certain Measures for the FY 2024 Program Year

We have adopted certain measures for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) and the Efficiency and Cost Reduction domain for

future program years in order to ensure that we can adopt baseline and performance periods of sufficient length for performance scoring purposes. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20427), we proposed the following performance standards for the FY 2024 program year for the Clinical Care domain (newly finalized as the Clinical Outcomes domain) and the Efficiency and Cost Reduction domain. We note that the performance standards for the MSPB measure are based on performance period data; therefore, we are unable to provide numerical equivalents for the standards at this time. These newly proposed performance standards for these measures are set out in the table below.

Although we invited public comments on these proposed performance standards for the FY 2024 program year, we did not receive any public comments on the proposed performance standards for the FY 2024 program year, and are adopting the performance standards listed below.

<b>Newly Finalized Performance Standards for the FY 2024 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Clinical Outcomes Domain<sup>^*</sup></b>		
MORT-30-AMI	0.869247	0.887868
MORT-30-HF	0.882308	0.907733
MORT-30-PN (updated cohort)	0.840281	0.872976
MORT-30-COPD	0.916491	0.934002
MORT-30-CABG	0.969499	0.980319
THA/TKA <sup>**</sup>	0.025396	0.018159

<b>Newly Finalized Performance Standards for the FY 2024 Program Year</b>		
<b>Measure Short Name</b>	<b>Achievement Threshold</b>	<b>Benchmark</b>
<b>Efficiency and Cost Reduction Domain</b>		
MSPB**	Median Medicare Spending per Beneficiary ratio across all hospitals during the performance period.	Mean of the lowest decile Medicare Spending per Beneficiary ratios across all hospitals during the performance period.

^ In section IV.I.4.a.(1) of the preamble of this final rule, we discuss our decision to finalize our proposal to change the name of this domain from the Clinical Care domain to the Clinical Outcomes domain beginning with the FY 2020 program year.

\* The mortality measures in the Hospital VBP Program use survival rates rather than mortality rates; as a result, higher values indicate better performance on these measures.

\*\* Lower values represent better performance.

## J. Hospital-Acquired Condition (HAC) Reduction Program

### 1. Background

We refer readers to section V.I.1.a. of the preamble of the FY 2014 IPPS/LTCH PPS final rule (78 FR 50707 through 50708) for a general overview of the HAC Reduction Program. For a detailed discussion of the statutory basis of the HAC Reduction Program, we refer readers to section V.I.2. of the preamble of the FY 2014 IPPS/LTCH PPS final rule (78 FR 50708 through 50709). For a further description of our previously finalized policies for the HAC Reduction Program, we refer readers to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50707 through 50729), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50087 through 50104), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49570 through 49581), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57011 through 57026) and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38269 through 38278). These policies describe the general framework for implementation of the HAC Reduction Program, including: (1) the relevant definitions applicable to the program; (2) the payment adjustment under the program; (3) the measure selection process and conditions for the program, including a risk-adjustment and scoring methodology; (4) performance scoring; (5) the process for making hospital-specific performance information available to the public, including the opportunity for a hospital to review the information and submit corrections; and (6) limitation of administrative and judicial review.

We also have codified certain requirements of the HAC Reduction Program at 42 CFR 412.170 through 412.172.

By publicly reporting quality data, we strive to put patients first by ensuring they, along with their clinicians, are empowered to make decisions about their own healthcare using information aligned with meaningful quality measures. The HAC Reduction Program, together with the Hospital VBP Program and the Hospital Readmissions Reduction Program, represents a key component of the way that we bring quality measurement, transparency, and improvement together with value-based purchasing programs to the inpatient care setting. We have undertaken efforts to review the existing HAC Reduction Program measure set in the context of these other programs, to identify how to reduce costs and complexity across programs while continuing to incentivize improvement in the quality and value of care provided to patients. To that end, we have begun reviewing our programs' measures in accordance with the Meaningful Measures Initiative we described in section I.A.2. of the preambles of the proposed rule and this final rule.

As part of this review, as discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20426 through 20428), we took a holistic approach to evaluating the appropriateness of the HAC Reduction Program's current measures in the context of the measures used in two other IPPS value-based purchasing programs (that is, the Hospital VBP Program and the Hospital Readmissions Reduction Program), as well as in the Hospital IQR Program. We view the three value-based purchasing programs together as a collective set of hospital value-based purchasing programs. Specifically, we believe the goals of the three value-based purchasing programs (the Hospital VBP, Hospital Readmissions Reduction, and HAC Reduction Programs) and the measures used in these

programs together cover the Meaningful Measures Initiative quality priorities of making care safer, strengthening person and family engagement, promoting coordination of care, promoting effective prevention and treatment, and making care affordable--but that the programs should not add unnecessary complexity or costs associated with duplicative measures across programs. The Hospital Readmissions Reduction Program focuses on care coordination measures, which address the quality priority of promoting effective communication and care coordination within the Meaningful Measures Initiative. The HAC Reduction Program focuses on patient safety measures, which address the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care. As part of this holistic quality payment program strategy, we believe the Hospital VBP Program should focus on the measurement priorities not covered by the Hospital Readmissions Reduction Program or the HAC Reduction Program. The Hospital VBP Program would continue to focus on measures related to:

- (1) the clinical outcomes, such as mortality and complications (which address the Meaningful Measures Initiative quality priority of promoting effective treatment);
- (2) patient and caregiver experience, as measured using the HCAHPS survey (which addresses the Meaningful Measures Initiative quality priority of strengthening person and family engagement as partners in their care); and
- (3) healthcare costs, as measured using the Medicare Spending per Beneficiary measure (which addresses the Meaningful Measures Initiative priority of making care affordable).

We believe this framework will allow hospitals and patients to continue to obtain meaningful information about hospital performance and incentivize quality improvement while also streamlining the measure

sets to reduce duplicative measures and program complexity so that the costs to hospitals associated with participating in these programs does not outweigh the benefits of improving beneficiary care.

As previously stated, the HAC Reduction Program focuses on making care safer by reducing harm caused in the delivery of care. Measures in the HAC Reduction Program, generally represent “never events”<sup>254</sup> and often, if not always, assess preventable conditions. By including these measures in the Program, we seek to encourage hospitals to address the serious harm caused by these adverse events and to reduce them. Therefore, after thoughtful review, we have determined that the CMS Patient Safety and Adverse Events Composite (CMS PSI 90) and the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) Healthcare-Associated Infection (HAI) measures (NHSN HAI measures) are most appropriately included as part of the HAC Reduction Program, and, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20474 through 20475; 20411), we proposed to remove these measures from the Hospital IQR and VBP Programs.<sup>255</sup> We believe this framework will allow hospitals and patients to continue to obtain meaningful information about hospital performance while streamlining the measure sets.

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<sup>254</sup> “The term “Never Event” was first introduced in 2001 by Ken Kizer, MD, former CEO of the National Quality Forum (NQF), in reference to particularly shocking medical errors (such as wrong-site surgery) that should never occur. Over time, the list has been expanded to signify adverse events that are unambiguous (clearly identifiable and measurable), serious (resulting in death or significant disability), and usually preventable. The NQF initially defined 27 such events in 2002. The list has been revised since then, most recently in 2011, and now consists of 29 events grouped into 7 categories: surgical, product or device, patient protection, care management, environmental, radiologic, and criminal.” Never Events, Available at: <https://psnet.ahrq.gov/primers/primer/3/never-events>.

<sup>255</sup> We note that following the comment period, we determined that the Hospital VBP Program would retain NHSN HAI measures and its version of the CMS PSI-90. In order to facilitate the Hospital VBP Program’s adoption of administrative requirements similar to requirements under the HAC Reduction Program, the Hospital IQR Program will retain NHSN HAI measures for additional year.

The HAC Reduction Program has historically relied on Hospital IQR Program processes for administrative support; we therefore proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20429 through 20437) HAC Reduction Program specific healthcare-associated infection measure data collection and validation requirements, and scoring associated with data completeness, timeliness, and accuracy. Contingent upon the Hospital IQR Program finalizing its proposal to remove NHSN HAI measures from its program (section VIII.A.5.b.(2)(b) of the preamble of the proposed rule), the HAC Reduction Program proposed to formally adopt analogous processes and independently manage these administrative processes to receive CDC NHSN data and begin validation seamlessly with January 1, 2019 infectious events. In the proposed rule, we noted that if the Hospital IQR Program did not finalize its proposal to remove NHSN HAI measures from its program, then the HAC Reduction Program would subsequently not finalize its proposals to manage the associated administrative processes.

In the proposed rule (83 FR 20426 through 20437), for the HAC Reduction Program, we proposed to: (1) establish administrative policies for the HAC Reduction Program to collect, validate, and publicly report quality measure data independently instead of conducting these activities through the Hospital IQR Program; (2) adjust the scoring methodology by removing domains and assigning equal weighting to each measure for which a hospital has a measure score in order to improve fairness across hospital types in the Program; (3) establish the data collection period for the FY 2021 Program Year; and (4) solicit stakeholder feedback regarding the potential future inclusion of additional measures, including eCQMs.

## 2. Accounting for Social Risk Factors in the HAC Reduction Program

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38273 through 38276), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>256</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social risk factors in CMS value-based purchasing programs.<sup>257</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404), ASPE's report to Congress found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule

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<sup>256</sup> See, for example United States Department of Health and Human Services. "Healthy People 2020: Disparities. 2014." Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

<sup>257</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), "Report to Congress: Social Risk Factors and Performance Under Medicare's Value-Based Purchasing Programs." December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

(82 FR 38274), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>258</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that “measures with a conceptual basis for adjustment generally did not demonstrate an empirical relationship” between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has extended the socioeconomic status (SES) trial,<sup>259</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018 and CY 2018 proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a hospital or provider that would also allow for a comparison of those differences, or disparities, across providers. Feedback we received across our quality reporting programs included encouraging CMS to explore whether factors that could be used to stratify or risk adjust the measures (beyond dual eligibility); considering the full range of differences in patient backgrounds that might affect outcomes; exploring risk adjustment approaches; and offering careful consideration of what type of information display would be most useful

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<sup>258</sup> Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

<sup>259</sup> Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

to the public.

We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care. Commenters encouraged us to stratify measures by other social risk factors such as age, income, and educational attainment. With regard to value-based purchasing programs, commenters also cautioned to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to more medically complex patients. Commenters also noted that value-based purchasing program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

As a next step, CMS is considering options to improve health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We also are considering how this work applies to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for more details, where we discuss the potential stratification of certain Hospital IQR Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders

on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

While we did not specifically request comment on social risk factors in the FY 2019 proposed rule, we received a number of comments with respect to social risk factors. We thank commenters for sharing their views and their willingness to support the efforts of CMS and NQF on this important issue. We take this feedback seriously and will continue to review social risk factors on an on-going and continuous basis. In addition, we both welcome and appreciate stakeholder feedback as we continue our work on these issues.

### 3. Previously-Adopted Measures for FY 2019 and Subsequent Years

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57013 through 57020), we finalized the CMS Patient Safety and Adverse Events Composite (CMS PSI 90)<sup>260</sup> measure for use in the FY 2018 program and subsequent years for Domain 1. In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50717), we finalized the use of Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) measures for Domain 2 for use in the FY 2015 program and subsequent years. Currently, the Program utilizes five NHSN measures: CAUTI, CDI, CLABSI, Colon and Abdominal Hysterectomy SSI, and MRSA Bacteremia. These previously finalized measures, with their full measure names, are shown in the table below.

<b>HAC Reduction Program Measures for FY 2019</b>
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<sup>260</sup> We note that measure stewardship of the recalibrated version of the Patient Safety and Adverse Events Composite (PSI 90) is transitioning from AHRQ to CMS and, as part of the transition, the measure will be referred to as the CMS Recalibrated Patient Safety Indicators and Adverse Events Composite (CMS PSI 90) when it is used in CMS quality programs.

Short Name	Measure Name	NQF #
<b>Domain 1</b>		
CMS PSI 90	Patient Safety and Adverse Events Composite	0531
<b>Domain 2</b>		
CAUTI	NHSN Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CDI	NHSN Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure	1717
CLABSI	NHSN Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
MRSA Bacteremia	NHSN Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure	1716

#### 4. Administrative Policies for the HAC Reduction Program for FY 2019 and Subsequent Years

##### a. Measure Specifications

As we stated in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53504 through 53505) for the Hospital IQR Program and subsequently finalized for the HAC Reduction Program in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50100 through 50101), we will use a subregulatory process to make nonsubstantive updates to measures used for the HAC Reduction Program and to use rulemaking to adopt substantive updates to measures. As with the Hospital IQR Program, we will determine what constitutes a substantive versus nonsubstantive change on a case-by-case basis. As we also stated in that rulemaking (79 FR 50100), examples of nonsubstantive changes to measures might include updated diagnosis or procedure codes, medication updates for categories of

medications, broadening of age ranges, and exclusions for a measure (such as the addition of a hospice exclusion to the 30-day mortality measures). We believe nonsubstantive changes may also include nonsubstantive updates to NQF-endorsed measures based upon changes to the measures' underlying clinical guidelines.

We will continue to use rulemaking to adopt substantive updates, and a subregulatory process to make nonsubstantive updates, to measures we have adopted for the HAC Reduction Program. As stated in past rules (78 FR 50776), examples of changes that we might consider to be substantive would be those in which the changes are so significant that the measure is no longer the same measure, or when a standard of performance assessed by a measure becomes more stringent (for example, changes in acceptable timing of medication, procedure/process, or test administration). Another example of a substantive change would be where the NQF has extended its endorsement of a previously endorsed measure to a new setting, such as extending a measure from the inpatient setting to hospice. These policies regarding what is considered substantive versus nonsubstantive would apply to all measures in the HAC Reduction Program.

We also note that the NQF process incorporates an opportunity for public comment and engagement in the measure maintenance process, which is available through its website at: <http://www.qualityforum.org/projectlisting.aspx>. We believe this policy adequately balances our need to incorporate updates to HAC Reduction Program measures in the most expeditious manner possible while preserving the public's ability to comment on updates that so fundamentally change an endorsed measure that it is no longer the same measure that we originally adopted.

Technical specifications for the CMS PSI 90 in Domain 1 can be found on the QualityNet website at:

<https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetBasic&cid=1228695355425>. Technical specifications for the NHSN HAI

measures in Domain 2 can be found at CDC's NHSN website at:

<http://www.cdc.gov/nhsn/acute-care-hospital/index.html>. Both websites provide measure updates and other information necessary to guide hospitals participating in the collection of HAC Reduction Program data.

b. Data Collection Beginning CY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20429 through 20430), we proposed to adopt data collection processes for the HAC Reduction Program to receive CDC NHSN data beginning with January 1, 2019 infection events to correspond with the Hospital IQR Program's calendar year reporting period and maintain the HAC Reduction Program's annual performance period start date. All reporting requirements, including quarterly frequency, CDC collection system, and deadlines would remain constant from current Hospital IQR Program requirements to aid continued hospital reporting through clear and consistent requirements. This proposed start date aligns with the effective date of the Hospital IQR Program's proposed removal of these measures beginning with CY 2019 reporting period/FY 2021 payment determination as discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, and should allow for a seamless transition.

The HAC Reduction Program identifies the worst-performing quartile of hospitals by calculating a Total HAC Score derived from the CMS PSI 90 and NHSN HAI measures, which are derived from claims-based and chart-abstracted measures data, respectively. No additional collection mechanisms are required for the CMS PSI 90 measure because it is a claims-based measure calculated using data submitted to CMS by hospitals for Medicare payment, and therefore imposes no additional administrative or reporting requirements on participating hospitals. For the NHSN HAI measures, we proposed to adopt the NHSN HAI data collection process established in the Hospital IQR Program if the Hospital IQR Program removed the NHSN HAI measures. We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50190), where we finalized the CDC NHSN as the mechanism to submit data on the NHSN HAI measures to the Hospital IQR Program, and to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50723), where the HAC Reduction Program stated that it would obtain HAI measure results that hospitals submitted to the CDC NHSN for the Hospital IQR Program. Hospitals would continue to submit data through the CDC NHSN portal located by selecting “NHSN Reporting” after signing in at: <https://sams.cdc.gov>, and the HAC Reduction Program would receive the NHSN data directly from the CDC instead of through the Hospital IQR Program as an intermediary.

We also proposed to adopt the Hospital IQR Program's exception policy to reporting and data submission requirements for the CAUTI, CLABSI, and Colon and Abdominal Hysterectomy SSI measures. As noted in FY 2013 IPPS/LTCH PPS final rule (77 FR 53539) and in FY 2014 IPPS/LTCH PPS final rule (78 FR 50821 through

50822) for the Hospital IQR Program and in FY 2015 IPPS/LTCH PPS final rule (79 FR 50096) for the HAC Reduction Program, CMS acknowledges that some hospitals may not have locations that meet the NHSN criteria for CLABSI or CAUTI reporting and that some hospitals may perform so few procedures requiring surveillance under the Colon and Abdominal Hysterectomy SSI measure that the data may not be meaningful for public reporting nor sufficiently reliable to be utilized for a program year. If a hospital does not have adequate locations or procedures, it should submit the Measure Exception Form to the HAC Reduction Program beginning on January 1, 2019. The IPPS Quality Reporting Programs Measure Exception Form is located using the link located on the QualityNet website under the Hospitals - Inpatient > Hospital Inpatient Quality Reporting Program tab at:

<https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228760487021>. As has been the case under the Hospital IQR Program, hospitals seeking an exception would submit this form at least annually to be considered.

Beginning in CY 2019,<sup>261</sup> the HAC Reduction Program would provide hospitals with the same NHSN HAI measures quarterly reports that stakeholders are accustomed to under the Hospital IQR Program. However, some hospitals that elected not to participate in the Hospital IQR Program may be unfamiliar with them. These reports, provided via

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<sup>261</sup> We note that in the FY 2019 IPPS/LTCH PPS proposed rule, we incorrectly stated that HAC Reduction Program would provide the same quarterly reports as stakeholders under Hospital IQR Program beginning in “FY 2019” as opposed to CY 2019, which aligned with the proposed removal of the NHSN HAI measures from the Hospital IQR Program. We intend to begin reporting data beginning with CY 2020 (January 1, 2020), which is when the HAC Reduction Program will begin collecting CDC NHSN data. This is 1 year after we initially proposed because the Hospital IQR Program is retaining these measures for an additional year.

the QualityNet Secure Portal at: [https://cportal.qualitynet.org/QNet/pgm\\_select.jsp](https://cportal.qualitynet.org/QNet/pgm_select.jsp), provide hospitals with their facility's quarterly measure data as well as facility, State and national-level results for the measures. To access their reports, hospitals must register for a QualityNet Secure Portal Account. We anticipate the transition to occur without interruption, with the only change to stakeholders being that they would receive reports from both the HAC Reduction Program and the Hospital IQR Program for the respective measures adopted in each program.

Comment: Many commenters supported CMS' proposal to adopt a HAC Reduction Program-specific data collection process to receive NHSN HAI data from CDC.

Response: We thank the commenters for their support. As noted in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we are delaying removal of the NHSN HAI measures from the Hospital IQR Program until the CY 2020 reporting period/FY 2022 payment determination. For this reason, we are also delaying collection and reporting of this data under the HAC Reduction Program until CY 2020.

Comment: A commenter urged CMS to clearly communicate any administrative policies regarding the collection of quality measure data to stakeholders before the implementation of any finalized administrative policies to ensure a seamless, uninterrupted transition. Other commenters asked CMS to clarify that quality data would still be available on *Hospital Compare* and sought assurance that hospitals would still receive access to the data they were accustomed to receiving through the Hospital IQR Program.

Response: We thank the commenters for the comments. We do not expect hospitals to notice any changes in the submission of their NHSN HAI data. We are merely finalizing the CDC NHSN portal as the mechanism through which the HAC Reduction Program receives NHSN HAI data. We expect this process to occur seamlessly, but because of prior rulemaking, we needed to formally propose and adopt the CDC NHSN as the mechanism for the HAC Reduction Program to receive data. However, if we determine that any changes will impact how hospitals are able to view and report their data, we will clearly communicate any information regarding administrative actions through our established communication channels.

We received numerous comments from stakeholders regarding our holistic approach to evaluating the appropriateness of measures previously adopted under the Hospital Readmissions Reduction Program, Hospital VBP Program, HAC Reduction Program, and Hospital IQR Program and our vision for the future of these programs. While program-specific comments and policies are discussed in more detail in each program-specific section of the preamble of this final rule, we would like to clarify that in light of our mission to prioritize patients in the provision of services, we are expanding the stated scope of the Hospital VBP Program to include patient safety measures. While we initially sought to delineate measure focus areas between the Hospital VBP Program and HAC Reduction Program, we agree with commenters that patient safety is a critical component of quality improvement efforts, and we appreciate commenters who conveyed the multifaceted benefits of retaining the safety measures in more than one value-based purchasing program. Therefore, we believe it is appropriate

and important to provide incentives under more than one program to ensure that hospitals take every precaution to avoid adverse patient safety events.

In addition, because the incentive payment structure is different under the HAC Reduction and Hospital VBP Programs, we believe including patient safety measures in both programs will provide hospitals with strong incentives to continually strive for both improvement and high performance on these measures. In addition, retaining the measures in both programs will best promote transparency through publicly reporting hospital performance on these measures, as stakeholders will continue to be able to see both hospitals' performance compared to all other hospitals and hospitals' performance improvement over time. Finally, we note this approach will also reduce provider burden associated with these measures because these measures are being finalized for removal from the Hospital IQR Program, as discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule.

As we discussed in the proposed rule, the reporting of NHSN HAI measures and the CMS PSI-90 will not change in any substantive way. The CMS PSI 90 measure is reported on the *Hospital Compare* web pages; however, the child measures (that is, the 10 individual indicators that comprise the CMS PSI 90 measure) are reported in the downloadable database on *Hospital Compare*. Similarly, we believe the NHSN HAI measures represent important quality data consumers of healthcare can use to make informed decisions. Therefore, we intend to continue making NHSN HAI data available to the public on a quarterly basis. As we stated in FY 2018 IPPS/LTCH PPS final rule (82 FR 38324), our current policy has been to report data under the Hospital IQR

Program as soon as it is feasible on CMS websites such as the *Hospital Compare* website, <http://www.medicare.gov/hospitalcompare>, after a 30-day preview period. Upon finalizing our policy for the HAC Reduction Program to collect NHSN HAI data, the HAC Reduction Program will continue to make data available in the same form and manner on the *Hospital Compare* website, and as it is currently displayed under the Hospital IQR Program.

Comment: A commenter strongly opposed CMS' proposal to have the HAC Reduction Program receive NHSN HAI data from the CDC NHSN portal because it did not believe the HAC Reduction Program should be separated from the Hospital IQR Program based on its concern separation of the programs will lead to patient harm, unfair scoring and inaccurate reporting of performance.

Response: We thank the commenter for this view. As we discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20427), we have undertaken efforts to review the existing HAC Reduction Program measure set in the context of these other programs, to identify how to reduce costs and complexity across programs while continuing to incentivize improvement in the quality and value of care provided to patients. As part of this review, we took a holistic approach to evaluating the appropriateness of the HAC Reduction Program's current measures in the context of the measures used in two other IPPS value-based purchasing programs (that is, the Hospital VBP Program and the Hospital Readmissions Reduction Program), as well as in the Hospital IQR Program, and after thoughtful review as well as consideration of public comments, we have determined that the CMS Patient Safety and Adverse Events

Composite (CMS PSI 90) and the NHSN HAI measures are most appropriately included as part of the HAC Reduction Program and Hospital VBP Program.

In order for the HAC Reduction Program to continue to receive its NHSN HAI data following the removal of NHSN HAI measures from the Hospital IQR Program, the HAC Reduction Program must establish the CDC NHSN as its mechanism to receive the required data. We believe that the collection and reporting of safety and NHSN HAI data is essential to reducing hospital-acquired conditions and improving patient safety. We also note that the HAC Reduction Program proposed to adopt validation policies for NHSN HAI data to ensure accurate data is received and used in the program. We provide more information on our validation policies in section IV.J.4.e.(1) of the preamble of this final rule below.

After consideration of the public comments we received, we are finalizing our proposal to adopt the CDC NHSN as the mechanism by which hospitals will report NHSN HAI measures for the HAC Reduction Program. However, we are delaying implementation of these reporting requirements until January 1, 2020 in order to align with a corresponding delay in removing these NHSN HAI measures from the Hospital IQR Program. We are also finalizing our proposal to adopt the IPPS Quality Reporting Programs Measure Exception Form beginning on January 1, 2020.

c. Review and Correction of Claims Data Used in the HAC Reduction Program for FY 2019 and Subsequent Years

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50726 through 50727), we detailed the process for the review and correction of claims-based data, and we did not

propose any changes. We calculate the measure in Domain 1 using a static snapshot (data extract) taken after the 90-day period following the last date of discharge used in the applicable period. We create data extracts using claims in CMS' Common Working File (CWF) 90 days after the last discharge date in the applicable period which we will use for the calculations. For example, if the last discharge date in the applicable period for a measure is June 30, 2018, we would create the data extract on September 30, 2018, and use those data to calculate the claims based measures for that applicable period.

Hospitals are not able to submit corrections to the underlying claims snapshot used for the Domain 1 measure calculations after the extract date, and are not be able to add claims to this data set. Therefore, hospitals are encouraged to ensure that their claims are accurate prior to the snapshot date. We consider hospitals' claims data to be complete for purposes of calculating the Domain 1 for the HAC Reduction Program after the 90-day period following the last date of discharge used in the applicable period.

For more information, we refer readers to FY 2014 IPPS/LTCH PPS final rule (78 FR 50726 through 50727). We reiterate that under this process, hospitals retain the ability to submit new claims and corrections to submitted claims for payment purposes in line with CMS' timely claims filing policies, but the administrative claims data used to calculate the Domain 1 measure and the resulting Domain Score reflect the state of the claims at the time of extraction from CMS' CWF.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20430), we did not propose any change to our current administrative policy regarding the submission, review, and correction of claims data.

d. Review and Correction of Chart-Abstracted NHSN HAI Data used in the HAC Reduction Program for FY 2019 and Subsequent Years

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50726), we stated that the HAC Reduction Program would use the same process as the Hospital IQR Program for hospitals to submit, review, and correct data for chart-abstracted NHSN HAI measures. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38270 through 38271), we clarified that hospitals had an opportunity to submit, review, and correct any of the chart-abstracted information for the full 4 ½ months after the end of the reporting quarter. We also noted that for the purposes of fulfilling CMS quality measurement reporting requirements, each facility's data must be entered into NHSN no later than 4 ½ months after the end of the reporting quarter.

For a detailed description of the process, we refer readers to FY 2014 IPPS/LTCH PPS final rule (78 FR 50726) where we explained that hospitals can begin submitting data on the first discharge day of any reporting quarter. Hospitals are encouraged to submit data early in the submission schedule not only to allow them sufficient time to identify errors and resubmit data before the quarterly submission deadline, but also to identify opportunities for continued improvement. Users may view and make corrections to the data that they submit starting immediately following submission. The data are populated into reports that are updated immediately with all data that have been submitted successfully. We believe that 4 ½ months is sufficient time for hospitals to submit, review, and make corrections to their HAI data. We also balance the correction needs of hospitals with the need to publicly report and refresh measure information on

*Hospital Compare* in a timely manner. Historically, CMS has generally refreshed HAI data on a quarterly basis on *Hospital Compare* in the Hospital IQR Program.

We wish to clarify that this HAI review and correction process is intended to permit hospitals review of measure performance and data submission feedback. Hospitals can use the NHSN system during the quarterly data submission period to identify any errors made in the reporting of a patient's specific "infection event," the denominator (that is, overall admissions data), and other NHSN protocol data used to calculate measure results before the quarterly submission deadline. The HAI review and correction process is different than and occurs prior to the annual Scoring Calculations Review and Correction Process, which is intended to ensure the accurate calculation of measure scoring used for payment, and was discussed in section IV.J.4.g. of the preamble of the proposed rule.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20430), we did not propose any changes to our current administrative policy regarding the submission, review, and correction of chart-abstracted HAI data.

e. Changes to Existing Validation Processes

As discussed in above in section IV.J.1. of the preamble of the proposed rule (83 FR 20431 through 20433), we proposed to adopt processes to validate the NHSN HAI measure data used in the HAC Reduction Program if the Hospital IQR Program finalizes its proposals to remove NHSN HAI measures from its program. While the HAC Reduction Program cannot adopt the Hospital IQR Program's process as is for various reasons as discussed below, we intend for the HAC Reduction Program's processes to

reflect, to the greatest extent possible, the current processes previously established the Hospital IQR Program. We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53539 through 53553), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50822 through 50835), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50262 through 50273), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49710 through 49712), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57173 through 57181), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38398 through 38403) for detailed information on the Hospital IQR Program's validation processes.

Currently, CMS estimates accuracy for the hospital-reported data submitted to the clinical warehouse and data submitted to NHSN as reproduced by a trained abstractor using a standardized NHSN HAI measure abstraction protocol created by CDC and CMS and posted on the QualityNet website at:

<https://www.qualitynet.org/dcs/ContentServer?cid=%201228776288808&pagename=OnetPublic%2FPage%2FQnetTier3&c=Page>. We proposed to adopt the validation

processes into the HAC Reduction Program as previously established by the Hospital IQR Program (with some exceptions as discussed below) in this section as follows: section IV.J.4.e.(1) of the preamble of the proposed rule (proposed measures subject to validation); section IV.J.4.e.(2) of the preamble of the proposed rule (proposed provider selection); section IV.J.4.e.(3) of the preamble of the proposed rule (proposed targeting criteria); section IV.J.4.e.(4) of the preamble of the proposed rule (proposed calculation of the confidence period); section IV.J.4.e.(5) of the preamble of the proposed rule (proposed educational review process); section IV.J.4.e.(6) of the preamble of the

proposed rule (proposed application of validation penalty); and section IV.J.4.e.(7) of the preamble of the proposed rule (proposed validation period).

Comment: Commenters expressed understanding and support for CMS' proposal to adopt the Hospital IQR Program's NHSN HAI measure validation process to the greatest extent possible in the HAC Reduction Program. The commenters appreciated that the validation requirements and process for the Hospital IQR Program are well established, and supported CMS' efforts to maintain continuity as it removes the measures from the Hospital IQR Program, but retains them in the HAC Reduction Program.

Response: We thank the commenters for their support. As noted in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we are delaying removal of the NHSN HAI measures from the Hospital IQR Program until the CY 2020 reporting period/FY 2022 payment determination. For this reason, we are also delaying adoption of the NHSN HAI measure validation processes into the HAC Reduction Program as discussed in more detail below.

Comment: One commenter recommended that CMS work on a continuing basis with experts at CDC and others to improve surveillance case definitions and other measures in NHSN. The commenter also encouraged CMS to work with CDC's Division of Healthcare Quality Promotion, which funds HAI programs in State health departments on the validations of NHSN data, because it believed that State HAI programs are better positioned to conduct validations in more facilities and follow-up with them to improve the quality of data.

Response: We thank the commenter for its views. We will continue to work with CDC and our partner institutions to ensure that the HAC Reduction Program is continually improving case definitions to improve quality measurement through specific and clear data element definitions, reduce hospital-acquired conditions, and avoids any unintended consequences.

We also appreciate the comment concerning validation. Our validation process is designed to ensure nationwide accuracy across all States reporting NHSN data through objective, clear, and specific feedback to hospitals about their reported data. We use a single nationwide methodology for validating NHSN data, which ensures a uniform application to this CMS requirement. We also recognize that over 20 State health departments do not currently validate NHSN data for hospitals. Our validation is the only known process to ensure accuracy in these States with no current validation process.

Comment: One commenter opposed CMS' proposal for the HAC Reduction Program's validation because it believed data validation should remain within the Hospital IQR Program. The commenter believed that CMS' plan for validation only further convolutes the programs and will cause undue financial hardship for healthcare systems.

Response: We thank the commenter for its views. We believe that the validation processes for NHSN HAI measures are essential to ensure the HAC Reduction Program continues to receive reliable NHSN HAI measures data for use in the program and for reporting NHSN HAI data following the removal of the NHSN HAI measures from the Hospital IQR Program.

After consideration of the public comments we received, we are finalizing our proposal to adopt a validation process for the NHSN HAI measures for the HAC Reduction Program as described in greater detail in the following sections of the preamble of this final rule. However, we are delaying adoption of this NHSN HAI measure validation process into the HAC Reduction Program until Q3 2020 discharges for FY 2023 in order to align with a corresponding delay in removing these NHSN HAI measures from the Hospital IQR Program.

(1) Measures Subject to Validation

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50828 through 50832) and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50264 through 50265), the Hospital IQR Program identified the following chart-abstracted NHSN HAI measures submitted via NHSN as being subject to validation: CAUTI, CDI, CLABSI, Colon and Abdominal Hysterectomy SSI, and MRSA Bacteremia.

In the proposed rule, we proposed that chart-abstracted NHSN HAI measures submitted via NHSN would be subject to validation in the HAC Reduction Program beginning with the Q3 2019 discharges for FY 2022. As stated in section IV.J.3. of the preamble of the proposed rule, and as finalized in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50717), the HAC Reduction Program currently includes five NHSN HAI measures: CAUTI, CDI, CLABSI, Colon and Abdominal Hysterectomy SSI, and MRSA Bacteremia.

Comment: Commenters generally understood and supported CMS' proposal to validate NHSN HAI measures upon their removal from the Hospital IQR Program.

Response: We appreciate the commenters' support. As noted in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we are delaying removal of the NHSN HAI measures from the Hospital IQR Program until the CY 2020 reporting period/FY 2022 payment determination. For this reason, we are also delaying adoption of the NHSN HAI measure validation processes into the HAC Reduction Program until Q3 2020 discharges for FY 2023.

Comment: One commenter, in addition to its general opposition to the HAC Reduction Program, more specifically opposed the HAC Reduction Program's validation proposals because it believed data validation and the NHSN HAI measures should remain within the Hospital IQR Program. The commenter believed that CMS' plan only further convolutes the programs and will cause undue financial hardship for healthcare systems.

Response: We thank the commenter for its comment. We believe that the validation processes for NHSN HAI measures are essential to ensure the HAC Reduction Program's continues to receive reliable NHSN HAI measures data for use in the program following removal of the NHSN HAI measures from the Hospital IQR Program.

After consideration of the public comments we received, we are finalizing our proposal to validate chart-abstracted NHSN HAI measures (CAUTI, CDI, CLABSI, Colon and Abdominal Hysterectomy SSI, and MRSA Bacteremia) submitted via NHSN under the HAC Reduction Program, but are delaying implementation to begin with Q3 2020 discharges for FY 2023.

## (2) Provider Selection

For chart-abstracted data validation in the Hospital IQR Program, CMS currently performs a random and targeted selection of participating hospitals on an annual basis, as initially set out in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50833 through 50834). For example, in December of 2017, CMS randomly selected 400 hospitals for validation for the FY 2020 payment determination. In April/May of 2018, an additional targeted provider sample of up to 200 hospitals are selected (78 FR 50833 through 50834). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20431), we stated that we intend to mirror these policies for the HAC Reduction Program, and thus, we proposed annual random selection of 400 hospitals and the annual targeted selection of 200 hospitals using the targeting criteria proposed below in section IV.J.4.e.(3) of the preamble of the proposed rule.

Unlike the Hospital IQR Program, which includes only hospitals with active Notices of Participation (77 FR 53536), we intend to include all subsection (d) hospitals in these proposed validation procedures, since all subsection (d) hospitals are subject to the HAC Reduction Program. Therefore, for the HAC Reduction Program, we proposed to include all subsection (d) hospitals in the provider sample for validation beginning with the Q3 2019 discharges for FY 2022. We believe this would be better representative of hospitals impacted by the Program. We note that for the FY 2018 HAC Reduction Program, which uses CY 2015 and 2016 NHSN HAI data, 44 hospitals were subject to the HAC Reduction Program, but chose not to participate in the Hospital IQR Program. These hospitals would be included in the validation process.

Comment: As noted above in section IV.J.4.e.(1) of the preamble of this final rule, commenters expressed understanding and support for CMS' proposal to adopt the Hospital IQR Program's NHSN HAI measure validation process to the greatest extent possible in the HAC Reduction Program. The commenters specifically appreciated that the validation requirements and that process for the Hospital IQR Program validation are well established, and CMS' efforts to maintain continuity as it removes the measures from the Hospital IQR Program, but retains them in the HAC Reduction Program.

Response: We interpret these general comments to include support for CMS' proposals regarding provider selection as well. We thank the commenters for their support.

Comment: A number of commenters understood the impetus for the HAC Reduction Program to adopt validation procedures, but expressed concern that as proposed, hospitals could be validated under both the Hospital IQR Program and the HAC Reduction Program during the same reporting period. These commenters urged CMS to enact a policy that prevents dual data validation selection for the same reporting period because the commenters were concerned about the potential for additional burden being imposed on participating hospitals. Some commenters suggested that CMS should align the random audits so that hospitals' audit frequency is unchanged. Other commenters suggested that a hospital should be ineligible for a random audit in a third year if they have been selected for audit in either the HAC Reduction Program or Hospital IQR Program in each year of the preceding two-year period. Other commenters encouraged CMS to finalize a policy under which a hospital selected for data validation

under the Hospital IQR Program is not eligible for selection in that year for data validation in the HAC Reduction Program.

Response: We thank the commenters for sharing their concerns and suggestions. As part of our Meaningful Measures Initiative and Patients Over Paperwork initiative, our goal is to reduce provider burden and we are striving to ensure our processes are as least burdensome as possible. We are currently reviewing several options to address commenters' concerns and will provide more information in future rulemaking.

Comment: One commenter encouraged CMS to ensure that notices of inclusion and validation of results be located in a single interface and posted at the same time. Another commenter stated that CMS needs to provide the hospitals with unified case selection reports, records requests and submission processes that will cover both the Hospital IQR Program and the HAC Reduction Program validation.

Response: We are aware of hospitals' concerns. We thank the commenters for their suggestions, which we will take under advisement. We will work with our contractors to ensure that the information is provided in clearest and most convenient manner, so that hospitals can spend less time doing paperwork and more time with patients.

After consideration of the public comments we received, we are finalizing our proposal to randomly select 400 hospitals. Again, we note that we are delaying adoption of the Hospital IQR Program's NHSN HAI measure validation process to begin with Q3 2020 discharges for FY 2023.

### (3) Targeting Criteria

As stated above, the Hospital IQR Program currently performs a random and targeted selection of hospitals for validation on an annual basis (78 FR 50833 through 50834). In the FY 2011 IPPS/LTCH PPS final rule (75 FR 50227 through 50229), the Hospital IQR Program finalized that the targeted selection will include all hospitals that failed validation the previous year. In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53552 through 53553), the Hospital IQR Program finalized additional criteria for selecting targeted hospitals: any hospital with abnormal or conflicting data patterns; any hospital with rapidly changing data patterns; any hospital that submits data to NHSN after the Hospital IQR Program data submission deadline has passed; any hospital that joined the Hospital IQR Program within the previous 3 years, and which has not been previously validated; any hospital that has not been randomly selected for validation in any of the previous 3 years; and any hospital that passed validation in the previous year, but had a two-tailed confidence interval that included 75 percent. In the FY 2014 IPPS/LTCH PPS final rule, the Hospital IQR Program expanded its targeting criteria to include any hospital which failed to report to NHSN at least half of actual HAI events detected as determined during the previous year's validation effort. We intend to propose similar policies for the HAC Reduction Program.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20431 through 20432). We proposed the following targeting criteria for the HAC Reduction Program beginning with the Q3 2019 discharges for FY 2022:

- Any hospital that failed validation the previous year;

- Any hospital that submits data to NHSN after the HAC Reduction Program data submission deadline has passed;
- Any hospital that not been randomly selected for validation in the past 3 years;
- Any hospital that passed validation in the previous year, but had a two-tailed confidence interval that included 75 percent;<sup>262</sup> and
- Any hospital which failed to report to NHSN at least half of actual HAI events detected as determined during the previous year's validation effort.

Although we invited public comment on our proposals, because commenters did not specify whether their responses were directed to general provider selection, or the targeted selection proposals, we have included all validation selection comments under the provider selection section above, located at section IV.J.4.e.(2) of the preamble of this final rule.

After consideration of the public comments we received, we are finalizing our proposal to select 200 additional hospitals for targeted validation. Again, we note that we are delaying adoption of the Hospital IQR Program's NHSN HAI measure validation process to begin with Q3 2020 discharges for FY 2023.

#### (4) Calculation of the Confidence Interval

The Hospital IQR Program scores hospitals based on an agreement rate between hospital-reported infections compared to events identified as infections by a trained CMS abstractor using a standardized protocol (77 FR 53548). As finalized in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53550 through 53551), the Hospital IQR Program uses

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<sup>262</sup> We will devise a two-tailed confidence interval formula using only NHSN HAI measures for the HAC Reduction Program. This will be posted to the QualityNet website.

the upper bound of a two-tailed 90 percent confidence interval around the combined clinical process of care and HAI scores to determine if a hospital passes or fails validation; if this number is greater than or equal to 75 percent, then the hospital passes validation.

We believe that a similar computation of the confidence interval is appropriate for the HAC Reduction Program, but that it include only the NHSN HAI measures and not the clinical process of care measures, which are not a part of the Program's measure set. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20432), we proposed that for the HAC Reduction Program beginning in FY 2022: (1) we would score hospitals based on an agreement rate between hospital-reported infections compared to events identified as infections by a trained CMS abstractor using a standardized protocol; (2) we would compute a confidence interval; (3) if the upper bound of this confidence interval is 75 percent or higher, the hospital would pass the HAC Reduction Program validation requirement; and (4) if the upper bound is below 75 percent, the hospital would fail the HAC Reduction Program validation requirement.

Comment: One commenter supported CMS' proposals for computing the confidence interval.

Response: We thank the commenter for its support.

After consideration of the public comments we received, we are finalizing our proposals to score hospitals based on an agreement rate between hospital-reported infections compared to events identified as infections by a trained CMS abstractor using a standardized protocol by computing a confidence interval. If the upper bound of this

confidence interval is 75 percent or higher, the hospital would pass the HAC Reduction Program validation requirement; if the upper bound is below 75 percent, the hospital would fail the HAC Reduction Program validation requirement. However, as discussed above, we are delaying adoption of the Hospital IQR Program's NHSN HAI measure validation process to begin with Q3 of FY 2020 discharges for FY 2023.

(5) Educational Review Process

Under the Hospital IQR Program, within 30 days of validation results being posted on the QualityNet Secure Portal at: [https://cportal.qualitynet.org/QNet/pgm\\_select.jsp](https://cportal.qualitynet.org/QNet/pgm_select.jsp), if a hospital has a question or needs further clarification on a particular outcome, the hospital may request an educational review (82 FR 38402 through 38403). Furthermore, if an educational review is requested for any of the first three quarters of validation yields incorrect CMS validation results for chart-abstracted measures, the corrected quarterly score will be used to compute the final confidence interval (82 FR 38402 through 38403).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20432), we stated that we plan to have similar procedures under the HAC Reduction Program. Therefore, for the HAC Reduction Program beginning with the Q3 2019 data validation, we proposed to have an educational review process, such that hospitals selected for validation would have a 30-day period following the receipt of quarterly validation results to seek educational review. During this 30-day period, hospitals may review, seek clarification, and potentially identify a CMS validation error. In addition, like the Hospital IQR Program, we proposed that if an educational review is timely requested for any of the first

three quarters and the review yields an incorrect CMS validation result, the corrected quarterly score would be used to compute the final confidence interval. Unlike the Hospital IQR Program educational review process (82 FR 38402), we also proposed that if an educational review is timely requested and an error is identified in the 4<sup>th</sup> quarter of review, we would use the corrected quarterly score to compute the final confidence interval.

Comment: A commenter supported CMS' proposal to adopt an Educational Review process similar to the current Hospital IQR Program. This commenter also supported the addition of the proposal that if a timely review is requested and an error is identified in the fourth quarter of review, CMS would use the corrected quarterly score to compute the final confidence interval.

Response: We thank the commenter for its support.

Comment: One commenter urged CMS to clearly communicate any administrative policies regarding the validation of NHSN HAI measures and provide education to stakeholders on any changes to existing processes.

Response: We plan to provide education to stakeholders before the implementation of finalized administrative policies to ensure a seamless, uninterrupted transition. We plan to hold education and outreach sessions, as well as post information, consistent with our normal course of communications to provide hospitals with as much information as possible on the new policies.

Comment: A commenter urged CMS to ensure that all measure abstractors complete the NHSN training modules for HAI surveillance in order to be qualified to

validate hospital reported data train measure abstractors because it believes this understanding of the application of the NHSN surveillance definitions will prevent unnecessary and time intensive educational reviews.

Response: We thank the commenter for its comment. All abstractors are trained to perform independent abstractions, and CMS provides ongoing training to abstractors to ensure they are competent to conduct abstractions. We will also continue to work with CDC to provide our abstractors with clear and specific NHSN surveillance to improve both hospital reporting accuracy and CMS validation abstraction reliability.

After consideration of the public comments we received, we are finalizing an educational review process, such that hospitals selected for validation would have a 30-day period following the receipt of quarterly validation results to seek educational review. During this 30-day period, hospitals may review, seek clarification, and potentially identify a CMS validation error. If an educational review is timely requested for any of the first three quarters and the review yields an incorrect CMS validation result, the corrected quarterly score would be used to compute the final confidence interval. If an educational review is timely requested and an error is identified in the 4<sup>th</sup> quarter of review, we would use the corrected quarterly score to compute the final confidence interval. Again, we note we are delaying adoption of the Hospital IQR Program's NHSN HAI measure validation process to begin with Q3 2020 discharges for FY 2023.

(6) Application of Validation Penalty

Currently, under the Hospital IQR Program, we randomly assign half of the hospitals selected for validation to submit CLABSI and CAUTI Validation Templates and the other half of hospitals to submit MRSA and CDI Validation Templates (78 FR 50826 through 50834). CMS selects up to four candidate NHSN HAI cases per hospital from each of the assigned Validation Templates (79 FR 50263 through 50265). CMS also selects up to two candidate Colon and Abdominal Hysterectomy SSI cases from Medicare claims data for patients who had colon surgeries or abdominal hysterectomies that appear suspicious of infection (78 FR 50826 through 50834). The Hospital IQR Program applies a full payment reduction if a hospital fails to meet any part of the validation process (75 FR 50219 through 50220; 81 FR 57180).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20432), for the HAC Reduction Program, if a hospital could not meet the overall validation requirement, we proposed to penalize hospitals that failed validation by assigning the maximum Winsorized z-score only for the set of measures CMS validated. For example, if a hospital was in the half selected to submit CLABSI and CAUTI Validation Templates but failed the validation, we proposed that hospital would receive the maximum Winsorized z-score for CLABSI, CAUTI, and Colon and Abdominal Hysterectomy SSI. Although it would better align with the Hospital IQR Program's current "all or nothing" approach (75 FR 50219 through 50220; 81 FR 57180) to penalize hospitals by assigning the maximum Winsorized z-scores for the entire domain, we believe that our chosen approach would be fairer to hospitals and would reduce the likelihood of their

automatically ranking in the worst-performing quartile based on validation results. Furthermore, we believe our proposed approach better aligns with the current HAC Reduction Program policy of assigning the maximum Winsorized z-score if hospitals do not submit data to NHSN for a given NHSN HAI measure (81 FR 57013).

Comment: Some commenters appreciated CMS' proposal to adopt what they characterized as a fair validation penalty. Specifically, the commenters believed that the proposed validation penalty is fairer to hospitals, will reduce the likelihood of a penalty due to data validation failure and is consistent with the current HAC reduction program policy of assigning the maximum Winsorized z-score when a hospital fails to submit data for a measure. The commenters stated their appreciation for the change in penalty application to only the measures that fail validation, rather than application of the penalty to all measures.

Response: We thank commenters for their support.

Comment: One commenter expressed concern about penalty application for failing validation and urged that validation penalty be no more than the penalty under Hospital IQR Program. The commenter noted that it is technically possible to fail validation for reporting HAC numbers that are higher than those the hospital actually has, and suggested that failing validation does not necessarily imply being a "worse performer." The commenter also expressed concern over the "worst performer" title to those that failed validation instead of performance issues.

Response: We appreciate the commenter's feedback. We continue to believe that hospitals need to submit accurate data for the HAC Reduction Program's integrity. With

respect to the “worst-performer” title, we will take the commenter’s concern under advisement, and consider options on how we identify hospitals that failed validation.

Comment: One commenter expressed concern that hospitals could fail validation due to electronic record issues that may prevent validators from having complete information related to the case, rather than inaccurate case determinations.

Response: We thank the commenter for its comment. We provide all abstractors training to perform independent abstractions, and CMS provides ongoing training to abstractors to ensure they are competent to conduct abstractions. We continue to work with CDC to provide our abstractors with clear and specific NHSN surveillance to improve both hospital reporting accuracy and CMS validation abstraction reliability. The participating hospital is responsible for sending all the required information necessary for validation. If hospitals are unable to submit data due to CMS system issues, hospitals should contact the QualityNet HelpDesk at:

<https://www.qualitynet.org/dcs/ContentServer?pagename=QnetPublic/Page/PageFooterContent&name=glh.ContactUs.pag>, and the Validation Support Contractor (VSC) at [validation@hcqis.org](mailto:validation@hcqis.org).

Comment: A commenter did not believe the penalty associated with a failed validation within the HAC Reduction Program is fair, nor did it believe the facilities would be able to easily replicate the calculation.

Response: We appreciate the commenter’s concern; however, in order to ensure that hospitals provide accurate data for the program, we continue to believe a validation penalty of the worst possible Winsorized z-score for the measures that fail validation is

fair and appropriate. We believe that facilities will be provided with sufficient information to inform their calculation, as is the current policy under the Hospital IQR Program.

After consideration of the public comments we received, we are finalizing our proposal that if a hospital does not meet the overall validation requirement, we will penalize it by assigning the maximum Winsorized z-score only for the set of measures CMS validated. Again, we note we are delaying adoption of the Hospital IQR Program's NHSN HAI measure validation process to begin with Q3 2020 discharges for FY 2023.

#### (7) Validation Period

The Hospital IQR Program currently uses a calendar year reporting period for NHSN HAI measures (76 FR 51644). For example, the FY 2020 measure reporting quarters include Q1 2018, Q2 2018, Q3 2018, and Q4 2018. Under the Hospital IQR Program, FY 2020 data validation consists of the following quarters: Q3 2017, Q4 2017, Q1 2018, and Q2 2018, the Hospital IQR Program schedule is available on QualityNet at: <https://www.qualitynet.org/dcs/ContentServer?cid=%201228776288808&pagename=QnetPublic%2FPage%2FQnetTier3&c=Page>. Currently, the HAC Reduction Program utilizes NHSN HAI data from two calendar years to calculate measure results. For example, the FY 2021 measure reporting quarters include Q1 2018 through Q4 2019.

When determining the proposed validation period for the HAC Reduction Program, we considered the performance and validation cycles currently in place under the Hospital IQR Program, and we considered key public reporting dates for the HAC Reduction Program. HAC Reduction Program scores must be calculated in time for

hospital specific reports (HSRs) to be issued annually, usually in July, and the 30-day Scoring Calculations Review and Correction period of the HSRs serves as the preview period for *Hospital Compare*. Then, HAC Reduction Program data published on *Hospital Compare* is refreshed annually as soon as feasible following the review period.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20432 through 20433), we stated that after consideration, we proposed that the HAC Reduction Program's performance period would remain 2 calendar years and that the validation period would include the four middle quarters in the HAC Reduction Program performance period (that is, third quarter through second quarter). This approach aligns with current the HAC Reduction Program performance period, it also aligns with current NHSN HAI validation quarters, and because we would continue to collect eight quarters of measure data, we anticipate no impact on the reliability of NHSN HAI results.

Because our validation sample of hospitals is selected annually and because of the time needed to build the required infrastructure, we believe the earliest opportunity to seamlessly begin this work under the HAC Reduction Program is Q3 2019. Therefore, we proposed that the HAC Reduction Program would begin validation of NHSN HAI measures data with July 2019 infection event data. The proposed commencement of validation, along with key validation dates, is shown in the table below.

<b>Proposed Validation Period for the HAC Reduction Program</b>					
<b>[*Dates are subject to change]</b>					
<b>Discharge Quarters by Fiscal Year (FY)</b>	<b>Current NHSN HAI Submission Deadline*</b>	<b>Current NHSN HAI Validation Templates*</b>	<b>Estimated CDAC<sup>263</sup> Record Request</b>	<b>Estimated Date Records Due to CDAC</b>	<b>Estimated Validation Completion</b>
FY 2022					
Q1 2019	08/15/2019				
Q2 2019	11/15/2019				
<b>Q3 2019^</b>	<b>02/15/2020</b>	<b>02/01/2020</b>	<b>02/28/2020</b>	<b>03/30/2020</b>	<b>06/15/2020</b>
<b>Q4 2019^</b>	<b>05/15/2020</b>	<b>05/01/2020</b>	<b>05/30/2020</b>	<b>06/29/2020</b>	<b>09/15/2020</b>
<b>Q1 2020^</b>	<b>08/15/2020</b>	<b>08/01/2020</b>	<b>08/30/2020</b>	<b>09/29/2020</b>	<b>12/15/2020</b>
<b>Q2 2020^</b>	<b>11/15/2020</b>	<b>11/01/2020</b>	<b>11/29/2020</b>	<b>12/29/2020</b>	<b>03/15/2021</b>
Q3 2020	02/15/2021				
Q4 2020	05/15/2021				
FY 2023					
Q1 2020	08/15/2020				
Q2 2020	11/15/2020				
<b>Q3 2020^</b>	<b>02/15/2021</b>	<b>02/01/2021</b>	<b>02/28/2021</b>	<b>03/30/2021</b>	<b>06/15/2021</b>
<b>Q4 2020^</b>	<b>05/15/2021</b>	<b>05/01/2021</b>	<b>05/30/2021</b>	<b>06/29/2021</b>	<b>09/15/2021</b>
<b>Q1 2021^</b>	<b>08/15/2021</b>	<b>08/01/2021</b>	<b>08/30/2021</b>	<b>09/29/2021</b>	<b>12/15/2021</b>
<b>Q2 2021^</b>	<b>11/15/2021</b>	<b>11/01/2021</b>	<b>11/29/2021</b>	<b>12/29/2021</b>	<b>03/15/2022</b>
Q3 2021	02/15/2022				
Q4 2021	05/15/2022				

Bolded rows with dates in each column, denoted with the ^ symbol next to the date in the Discharge Quarter by Fiscal Year (FY) column, indicate the validation cycle for the FY.

To maintain symmetry with the current Hospital IQR Program validation schedule as set forth on QualityNet at:

<https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPPage%2FQnetTier4&cid=1140537256076>, we proposed that for hospitals selected for

validation, the NHSN HAI validation templates would be due before the HAC Reduction

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263 The CMS Clinical Data Abstraction Center (CDAC) performs the validation. We neglected to define the acronym in the proposed rule, so we define it now.

Program NHSN HAI data submission deadlines. To the greatest extent possible, we proposed to keep the processes the same as they are currently implemented in the Hospital IQR Program. Because these deadlines would function in the same manner as the current policy under the Hospital IQR Program, we expect that most providers are familiar with this process. For more information, we refer readers to the Chart-Abstracted Data Validation Resources information available at:

<https://www.qualitynet.org/dcs/ContentServer?cid=1140537256076&pagename=QnetPublic%2FPage%2FQnetTier3&c=Page>.

We did not receive any comments on our validation proposals; however, as discussed above, we are delaying adoption of the Hospital IQR Program’s NHSN HAI measure validation process into the HAC Reduction Program in order to align with a corresponding delay in removal of these measures from the Hospital IQR Program. We are therefore finalizing our proposal to begin validation with Q3 discharges for FY 2020 for the FY 2023 program year.

The commencement of validation, along with key validation dates, is shown in the table below.

<p><b>Finalized Validation Period for the HAC Reduction Program</b>  <b>[*Dates are subject to change]<sup>264</sup></b></p>
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264 As we stated in the proposed rule, the dates of validation are subject to change. In the proposed rule, we proposed to begin validation with Q3 of FY 2019 discharges for FY 2022. However, because the Hospital IQR Program is delaying its removal of NHSN HAI measures by a year, we are delaying the implementation of the HAC Reduction Program’s validation process by one year. This table now reflects the updated implementation date of Q3 of FY 2020 discharges for FY 2023.

<b>Discharge Quarters by Fiscal Year (FY)</b>	<b>Current NHSN HAI Submission Deadline*</b>	<b>Current NHSN HAI Validation Templates*</b>	<b>Estimated CDAC<sup>265</sup> Record Request</b>	<b>Estimated Date Records Due to CDAC</b>	<b>Estimated Validation Completion</b>
FY 2023					
Q1 2020	08/15/2020				
Q2 2020	11/15/2020				
<b>Q3 2020<sup>^</sup></b>	<b>02/15/2021</b>	<b>02/01/2021</b>	<b>02/28/2021</b>	<b>03/30/2021</b>	<b>06/15/2021</b>
<b>Q4 2020<sup>^</sup></b>	<b>05/15/2021</b>	<b>05/01/2021</b>	<b>05/30/2021</b>	<b>06/29/2021</b>	<b>09/15/2021</b>
<b>Q1 2021<sup>^</sup></b>	<b>08/15/2021</b>	<b>08/01/2021</b>	<b>08/30/2021</b>	<b>09/29/2021</b>	<b>12/15/2021</b>
<b>Q2 2021<sup>^</sup></b>	<b>11/15/2021</b>	<b>11/01/2021</b>	<b>11/29/2021</b>	<b>12/29/2021</b>	<b>03/15/2022</b>
Q3 2021	02/15/2022				
Q4 2021	05/15/2022				

Bolded rows with dates in each column, denoted with the ^ symbol next to the date in the Discharge Quarter by Fiscal Year (FY) column, indicate the validation cycle for the FY.

f. Data Accuracy and Completeness Acknowledgement (DACA)

We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53554) for DACA requirements previously adopted by the Hospital IQR Program. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20433), we proposed that if the Hospital IQR Program finalizes its proposal to remove NHSN HAI measures from its program, then the HAC Reduction Program would adopt this same process. Hospitals would have to electronically acknowledge the data submitted are accurate and complete to the best of their knowledge. Hospitals would be required to complete and sign the DACA on an annual basis via the QualityNet Secure Portal:

[https://cportal.qualitynet.org/QNet/pgm\\_select.jsp](https://cportal.qualitynet.org/QNet/pgm_select.jsp). The submission period for signing and completing the DACA is April 1 through May 15, with respect to the time period of

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265 The CMS Clinical Data Abstraction Center (CDAC) performs the validation. We neglected to define the acronym in the proposed rule, so we define it now.

January 1 through December 31 of the preceding year. The initial HAC Reduction Program proposed annual DACA signing and completing period would be April 1 through May 15, 2020 for calendar year 2019 data.

Comment: One commenter supported CMS' proposal to adopt DACA requirements for hospitals to electronically acknowledge the accuracy and completeness of data to the best of their knowledge on an annual basis via the QualityNet Secure Portal.

Response: We thank the commenter for its support.

After consideration of the public comment we received, we are finalizing our proposal to require that hospitals electronically acknowledge the data submitted are accurate and complete to the best of their knowledge. Hospitals would be required to complete and sign the DACA on an annual basis via the QualityNet Secure Portal. As noted in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we are delaying removal of the NHSN HAI measures from the Hospital IQR Program until the CY 2020 reporting period/FY 2022 payment determination. For this reason, we are also delaying the first DACA submission under the HAC Reduction Program until April 1 through May 15, 2021 for calendar year 2020 data.

g. Scoring Calculations Review and Correction Period

Although we did not propose any changes to the review and correction procedures for FY 2019 (83 FR 20433 through 20434), we intend to rename the annual 30-day review and correction period to the "Scoring Calculations Review and Correction Period." The purpose of the annual 30-day review and corrections period is to allow

hospitals to review the calculation of their HAC Reduction Program scores, and the new name would more clearly convey both the intent and limitation. The naming convention would further distinguish this period from earlier opportunities during which hospitals can review and correct their underlying data.

The HAC Reduction Program will continue to provide annual confidential hospital-specific reports and discharge level information used in the calculation of their Total HAC Scores via the QualityNet Secure Portal. As noted in section IV.J.4.b. of the preamble of the proposed rule regarding quarterly reports, hospitals must also register at: <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138115992011> for a QualityNet Secure Portal account in order to access their annual hospital-specific reports.

As we stated in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50725 through 50728), hospitals have a period of 30 days after the information is posted to the QualityNet Secure Portal to review their HAC Reduction Program scores, submit questions about the calculation of their results, and request corrections for their HAC Reduction Program scores prior to public reporting. Hospitals may use the 30-day Scoring Calculations Review and Correction Period to request corrections to the following information prior to public reporting:

- CMS PSI 90 measure score
- CMS PSI 90 measure result and Winsorized measure result
- Domain 1 score
- CLABSI measure score

- CAUTI measure score
- Colon and Abdominal Hysterectomy SSI measure score
- MRSA Bacteremia measure score
- CDI measure score
- Domain 2 score
- Total HAC Score

As we clarified in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38270 through 38271), this 30-day period is not an opportunity for hospitals to submit additional corrections related to the underlying claims data for the CMS PSI 90, or to add new claims to the data extract used to calculate the results. Hospitals have an opportunity to review and correct claims data used in the HAC Reduction Program as described in section IV.J.4.c. of the preamble of the proposed rule, and detailed in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50726 through 50727).

As we also clarified in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38270 through 38271), this 30-day period is not an opportunity for hospitals to submit additional corrections related to the underlying NHSN HAI data used to calculate the scores, including: reported number of NHSN HAIs; Standardized Infection Ratios (SIRs); or reported central-line days, urinary catheter days, surgical procedures performed, or patient days. Hospitals would have an opportunity to review and correct chart-abstracted NHSN HAI data used in the HAC Reduction Program as described in section IV.J.4.d. of the preamble of the proposed rule.

Comment: A commenter supported CMS' proposed renaming convention for the 30-day review period to the "Scoring Calculation Review and Correction Period" to accurately reflect the intent of the process.

Response: We thank the commenter for its support.

Comment: A commenter recommended that CMS clarify the review periods by distinguishing when a hospital is reviewing the underlying data versus the scoring of that data under the HAC Reduction Program. The commenter believed that a clarifying name change is helpful, but requested more information on CMS' quality reporting websites to ensure transparency of the differing review periods in programs.

Response: We thank the commenter for its views. We refer readers to IV.J.4.c. of the preamble of this final rule (Review and Correction of Claims Data Used in the HAC Reduction Program for FY 2019 and Subsequent Years) and IV.J.4.d. of the preamble of this final rule (Review and Correction of Chart-Abstracted NHSN HAI Data used in the HAC Reduction Program for FY 2019 and Subsequent Years) where we discuss the review and corrections process of underlying data for both claims-based and chart-abstracted measures. We will take the commenters concern into account and consider what, if any, changes to CMS' quality reporting websites and education and outreach materials could facilitate greater transparency.

#### h. Public Reporting of Hospital-Specific Data Beginning FY 2019

##### (1) Public Reporting of Hospital-Specific Data Beginning FY 2019

Section 1886(p)(6)(A) of the Act requires the Secretary to "make information available to the public regarding HAC rates of each subsection (d) hospital" under the

HAC Reduction Program. Section 1886(p)(6)(B) of the Act also requires the Secretary to “ensure that an applicable hospital has the opportunity to review, and submit corrections for, the HAC information to be made public for each hospital.” Section 1886(p)(6)(C) of the Act requires the Secretary to post the HAC information for each applicable hospital on the *Hospital Compare* website in an easily understood format.

As finalized in FY 2014 IPPS/LTCH PPS final rule (78 FR 50725), we will make the following information public on the *Hospital Compare* website: (1) hospital scores with respect to each measure; (2) each hospital’s domain-specific score; and (3) the hospital’s Total HAC Score. If the Hospital IQR Program finalizes its proposal to remove the CMS PSI 90 from the Program, the CMS PSI 90 individual indicator measure results (that is, the child measures) would be reported under the HAC Reduction Program. The CMS PSI 90 measure is reported on the *Hospital Compare* web pages; however, the child measures are reported in the downloadable database on *Hospital Compare*. Similarly, we believe the NHSN HAI measures represent important quality data consumers of healthcare can use to make informed decisions. Therefore, we intend to continue making NHSN HAI data available to the public on a quarterly basis. As we stated in FY 2018 IPPS/LTCH PPS final rule (82 FR 38324), our current policy has been to report data under the Hospital IQR Program as soon as it is feasible on CMS websites such as the *Hospital Compare* website, <http://www.medicare.gov/hospitalcompare>, after a 30-day preview period. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20434), we proposed to make data available in the same form and manner as currently displayed under the Hospital IQR Program.

As we stated in the proposed rule, we intend to maintain as much consistency as possible in how the measures are currently reported on *Hospital Compare*, including how they are displayed and the frequency of reporting.

Comment: Commenters encouraged CMS to commit to publicly reporting the NHSN HAI data on *Hospital Compare* and strongly urged CMS to communicate how it specifically intends to report quality measure data, including NHSN HAI data. One commenter also urged CMS to post data on both the *Hospital Compare* and the <https://data.medicare.gov/> websites.

Response: We thank the commenters for their views. As we stated in the proposed rule, we intend to continue making NHSN HAI data available to the public on a quarterly basis as soon as it is feasible on CMS websites such as the *Hospital Compare* website, <http://www.medicare.gov/hospitalcompare>, after a 30-day preview period. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20434), we proposed to make data available in the same form and manner as currently displayed under the Hospital IQR Program.

Comment: A commenter strongly urged CMS to publicly report both the full CMS PSI 90 composite score and the scores of individual child measures within the composite. In the reporting of the child measures, the commenter encouraged CMS to continue to report the current data fields that presently appear in the CMS *Hospital Compare* downloadable database (for example, denominator, score) because the commenter believed that these fields are helpful in discerning performance in the child

measures, and are useful for health care raters that wish to responsibly use the measures in their transparency efforts.

Response: We thank the commenter for the comment. As discussed in section VIII.A.5.b.(2)(a) of the preamble of this final rule, we are finalizing our proposal to remove the CMS PSI 90 measure from the Hospital IQR Program; however, the CMS PSI 90 measure will continue to be reported on the *Hospital Compare* web pages; and the child measures will continue to be reported in the downloadable database on *Hospital Compare*.

(2) Clarification of Location of Publicly-Reported HAC Reduction Program Information

Section 1886(p)(6)(C) of the Act, as codified at 42 CFR 412.172(f), requires that HAC information be posted on the *Hospital Compare* website in an easily understandable format. *Hospital Compare* is the official website for the publication of the required HAC Reduction Program data, and the location where the HAC Reduction Program will continue to post data. We believe the above approach complies with the Act and provides hospitals and the public sufficient access to information.

i. Limitation on Administrative and Judicial Review

Section 1886(p)(7) of the Act, as codified at 42 CFR 412.172(g), provides that there will be no administrative or judicial review under section 1869 of the Act, under section 1878 of the Act, or otherwise for any of the following:

- The criteria describing an applicable hospital in paragraph 1886(p)(2)(A) of the Act;

- The specification of hospital acquired conditions under paragraph 1886(p)(3) of the Act;
- The specification of the applicable period under paragraph 1886(p)(4) of the Act;
- The provision of reports to applicable hospitals under paragraph 1886(p)(5) of the Act; and
- The information made available to the public under paragraph 1886(p)(6) of the Act.

For additional information, we refer readers to FY 2014 IPPS/LTCH PPS final rule (78 FR 50729) and FY 2015 IPPS/LTCH PPS final rule (79 FR 50100).

## 5. Changes to the HAC Reduction Program Scoring Methodology

We regularly examine the HAC Reduction Program's scoring methodology for opportunities for improvement. This year, we examined several alternative scoring options that would allow the scoring methodology to continue to fairly assess all hospitals.

### a. Current Methodology

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57022 through 57025), we adopted a Winsorized z-score scoring methodology for FY 2018 in which we rank hospitals by calculating a Total HAC Score based on hospitals' performance on two domains: patient safety (Domain 1) and NHSN HAIs (Domain 2). Domain 1 includes the CMS PSI 90 measure. Domain 2 includes the CLABSI, CAUTI, Colon and

Abdominal Hysterectomy SSI,<sup>266</sup> MRSA Bacteremia, and CDI measures. Under the current scoring methodology, hospitals' Total HAC Scores are calculated as a weighted average of Domain 1 (15 percent) and Domain 2 (85 percent). Hospitals with a measure score for at least one Domain 2 measure receive a Domain 2 score. Hospitals with 3 or more discharges for at least one component indicator for the CMS PSI 90 receive a Domain 1 score. The first table below illustrates the weight CMS applies to each measure for the roughly 99 percent of non-Maryland hospitals with a Domain 1 score and the second table below illustrates the weight CMS applies to each measure for the one percent of non-Maryland hospitals without a Domain 1 score.

**Weight Applied To Each Measure By Number Of Domain 2 Measures With Measure Scores For Hospitals With A Domain 1 Score In FY 2019 (N=3,195)**

Number of Domain 2 measures with measure scores	Number (percent) of hospitals in FY 2019 <sup>a,b</sup>	Weight applied to:	
		CMS PSI 90	Each Domain 2 measure
0	223 (6.9%)	100.0	N/A
1	332 (10.3%)	15.0	85.0
2	210 (6.5%)	15.0	42.5
3	188 (5.8%)	15.0	28.3
4	250 (7.8%)	15.0	21.3
5	1,992 (61.9%)	15.0	17.0

<sup>a</sup> The denominator for percentage calculations is all non-Maryland hospitals with a FY 2019 Total HAC Score (N=3,219).

<sup>b</sup> This table is updated from the FY 2019 IPPS/LTCH PPS proposed rule, which used FY 2018 data. To see that table, we refer readers to 83 FR 20434 through 20437.

**Weight Applied To Each Measure By Number Of Domain 2 Measures With Measure Scores For Hospitals Without A Domain 1 Score In FY 2019 (N=24)**

Number of Domain 2 measures with measure scores	Number (percent) of hospitals in	Weight applied to:	
		CMS PSI 90	Each

<sup>266</sup> Colon and Abdominal Hysterectomy SSI is reported as one score under the HAC Reduction Program.

	<b>FY 2019<sup>a,b</sup></b>		<b>Domain 2 measure</b>
1	8 (0.2%)	N/A	100.0
2	1 (0.0%)	N/A	50.0
3	0 (0.0%)	N/A	33.3
4	3 (0.1%)	N/A	25.0
5	12 (0.4%)	N/A	20.0

<sup>a</sup> The denominator for percentage calculations is all non-Maryland hospitals with a FY 2019 Total HAC Score (N=3,219).

<sup>b</sup> This table is updated from the FY 2019 IPPS/LTCH PPS proposed rule, which used FY 2018 data. To see that table, we refer readers to FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20434 through 20437).

As shown in the first table above, under the currently methodology, the weight applied to the CMS PSI 90 and each Domain 2 measure is almost the same (15.0 and 17.0 percent, respectively) for hospitals with measure scores for all six program measures. However, for hospitals with between one and four Domain 2 measures, the weight applied to the CMS PSI 90 is lower (and in some cases much lower) than the weight applied to each Domain 2 measure. For hospitals with a measure score for only one or two Domain 2 measures (that is, low-volume hospitals in particular), a disproportionately large weight is applied to each Domain 2 measure. Several stakeholders voiced concerns about the disproportionately large weight applied to the one or two Domain 2 measures for which low-volume hospitals have a measure score. As seen in the tables above; under the currently methodology, the weighting for the Domain 2 measures is dependent on the number of measures with data for those hospitals without a Domain 1 score.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20434 through 20437), we discussed two alternative scoring methodologies for calculating hospitals’ Total HAC Scores. Our preferred approach, the Equal Measure Weights policy, involves removing

domains and applying an equal weight to each measure for which a hospital has a measure score in Total HAC Score calculations. However, we sought public comment on an additional approach: applying a different weight to each domain depending on the number of measures for which a hospital has a measure score (Variable Domain Weights).

b. Equal Measure Weights

In the proposed rule, we stated that our preferred approach is the Equal Measure Weights Policy. We would remove domains from the HAC Reduction Program and simply assign equal weight to each measure for which a hospital has a measure score. We would calculate each hospital’s Total HAC Score as the equally weighted average of the hospital’s measure scores. The table below displays the weights applied to each measure under this approach. All other aspects of the HAC Reduction Program scoring methodology would remain the same, including the calculation of measure scores as Winsorized z-scores, the determination of the 75th percentile Total HAC Score, and the determination of the worst-performing quartile.

**Weight Applied To Each Measure By Number Of Measures With Measure Score For Hospitals With And Without A CMS PSI 90 Score Under Equal Measure Weights Approach**

Number of NHSN HAI measures with measure score	Weight applied to:	
	CMS PSI 90	Each NHSN HAI measure
0	100.0	N/A
1	50.0	50.0
2	33.3	33.3
3	25.0	25.0
4	20.0	20.0
5	16.7	16.7
Any number	N/A	100.0 (equally divided)

Number of NHSN HAI measures with measure score	Weight applied to:	
	CMS PSI 90	Each NHSN HAI measure
		among each NHSN HAI measure)

As shown in the table above, by applying an equal weight to each measure for all hospitals, the Equal Measure Weights approach addresses stakeholders’ concerns about the disproportionately large weight applied to Domain 2 measures for certain hospitals under the current scoring methodology.

c. Alternative Methodology Considered: Variable Domain Weights

We also analyzed a Variable Domain Weights approach. Under this approach, the weights applied to Domain 1 and Domain 2 depend upon the number of measure scores a hospital has in each domain. The table below displays the weights applied to each domain under this approach.

**Weight Applied To Each Measure By Number Of Domain 2 Measures With Measure Scores For Hospitals With And Without A Domain 1 Score Under Variable Domain Weights Approach**

Number of Domain 2 measures with measure score	Weight applied to:		
	Domain 1 (CMS PSI 90)	Domain 2	Each Domain 2 measure
0	100.0	N/A	N/A
1	40.0	60.0	60.0
2	30.0	70.0	35.0
3	20.0	80.0	26.7
4	15.0	85.0	21.3
5	15.0	85.0	17.0
Any number	N/A	100.0	Equally divided

As shown in the table above, under the Variable Domain Weights approach, the difference in the weight applied to the CMS PSI 90 and each Domain 2 measure is smaller than the difference under the current scoring methodology for hospitals that have a Domain 1 score (the first table under the Equal Measure Weights approach discussion, above).

d. Analysis<sup>267</sup>

Our priority is to adopt a policy that improves the scoring methodology and increases fairness for all hospitals. Both proposed approaches address stakeholders' concerns about the disproportionate weight applied to Domain 2 measures for low-volume hospitals. We simulated results under each scoring approach using FY 2019 HAC Reduction Program data. We compared the percentage of hospitals in the worst-performing quartile in FY 2019 to the percentage that would be in the worst-performing quartile under each scoring approach. The table below provides a high-level overview of the impact of these approaches on several key groups of hospitals.

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<sup>267</sup> This analysis is updated from the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20434 through 20437), which used FY 2018 data.

**Estimated Impact of Scoring Approaches on Percentage of Hospitals in Worst-Performing Quartile by Hospital Group<sup>c</sup>**

<b>Hospital Group<sup>a</sup></b>	<b>Equal Measure Weights</b>	<b>Variable Domain Weights</b>
Teaching hospitals: 100 or more residents (N=248)	3.6%	1.6%
Safety-net <sup>b</sup> (N=646)	0.9%	0.8%
Urban hospitals: 400 or more beds (N=358)	2.5%	0.8%
Hospitals with fewer than 100 beds (N=1,208)	-1.7%	-1.0%
Hospitals with a measure score for:	.	.
Zero Domain 2 measures (N=223)	0.4%	0.0%
One Domain 2 measure (N=340)	-4.1%	-2.9%
Two Domain 2 measures (N=211)	-3.8%	-3.3%
Three Domain 2 measures (N=188)	-0.5%	0.5%
Four Domain 2 measures (N=253)	0.0%	0.4%
Five Domain 2 measures (N=2,004)	1.1%	0.7%

<sup>a</sup> The number of hospitals in the given hospital group for FY 2019 is specified in parenthesis in this column (for example, N=248).

<sup>b</sup> Hospitals are considered safety-net hospitals if they are in the top quintile for DSH percent.

<sup>c</sup> This table is updated from the FY 2019 IPPS/LTCH PPS proposed rule, which used FY 2018 data.

As shown in the table above, the Equal Measure Weights approach generally has a larger impact than the Variable Domain Weights approach. Under the Equal Measure Weights approach, as compared to the current methodology using FY 2019 HAC Reduction Program data, the percentage of hospitals in the worst-performing quartile decreases by 1.7 percent for small hospitals (that is, fewer than 100 beds), 4.1 percent for hospitals with one Domain 2 measure, 3.8 percent for hospitals with two Domain 2 measures, while it increases by 2.5 percent for large urban hospitals (that is, 400 or more beds) and 3.6 percent for large teaching hospitals (that is, 100 or more residents). The Variable Domain Weights approach decreases the percentage of hospitals in the worst-performing quartile by 1.0 percent for small hospitals, 2.9 percent for hospitals

with one Domain 2 measure, and 3.3 for hospitals with two Domain 2 measures, while it increases the percentage of hospitals in the worst-performing quartile by 0.8 percent for large urban hospitals and 1.6 percent for large teaching hospitals.

We prefer the Equal Measure Weights approach because it reduces the percentage of low-volume hospitals in the worst-performing quartile in the simplest manner to hospitals, while not greatly increasing the potential costs on other hospital groups. In addition, should we add measures or remove measures from the program in the future, we would not need to modify the weighting scheme under the Equal Measure Weights approach, unlike the current scoring methodology or the Variable Domain Weights approach.

Finally, the Equal Measure Weights policy aligns with the intent of the original program design to apply a similar weight to each measure. That is, we applied a weight of 35 percent to Domain 1 and 65 percent to Domain 2 in FY 2015, so that the weight applied to each measure would be roughly the same for hospitals with measure scores for all measures. When we added Colon and Abdominal Hysterectomy SSI to Domain 2 in FY 2016 and CDI and MRSA Bacteremia in FY 2017, we increased the weight of Domain 2 to 75 percent and 85 percent, respectively, so that the weight applied to each measure would be nearly the same for hospitals with measure scores for all measures. However, the static domain weights we applied for these program years led to a substantially lower weight being applied to the CMS PSI 90 compared with Domain 2 measures for hospitals with only one or two Domain 2 measures. After assessing the

results of our analysis and these additional considerations, we proposed to adopt the Equal Measure Weights Policy starting in FY 2020.

We also recognize that under this proposal the NHSN HAI portfolio of up to five measures would continue to be weighted much more highly than the CMS PSI 90 for the vast majority of hospitals with more than one NHSN HAI data meeting minimum precision criteria (MPC) of 1.0. For example, hospitals reporting five NHSN HAI measures meeting the MPC of 1.0 and CMS PSI 90 would be weighted as 83.33 percent using the equal weighting proposal for the set of NHSN HAI measures and 16.67 percent for the CMS PSI 90. Hospitals reporting fewer NHSN HAIs meeting the MPC of 1.0 would receive lower total HAI weighting to account for the reduced number of NHSN HAI measures.

This proposal is intended to address the impact of disproportionate weighting at the measure level for the subset of hospitals with relatively few NHSN HAI measures. Under the current weighting methodology, hospitals reporting on a single NHSN HAI measure receive 85 percent measure level weight for that one measure.

Comment: Many commenters supported the Equal Measure Weights approach. Some commenters supported this approach because they believed it will improve the fairness of the HAC Reduction Program's penalty assessments on smaller and low-volume hospitals whose HAI domain scores could often rest on only one or two measures. Some commenters supported this approach because they believed it will ensure that patient safety and adverse event avoidance (CMS PSI 90) remains a fixture of

the HAC Reduction Program. Other commenters supported this approach because they believed that its adoption would simplify the calculation of performance results.

Response: We thank the commenters for their support for our preferred approach. We agree that the Equal Measure Weights policy aligns with the intent of the original program design to apply a similar weight to each measure and will help address the concern about the substantially high weight being applied to one or two HNSN HAI measures when a hospital does not have data for the other HNSN HAI measures. We also believe the Equal Weights approach simplifies the methodology and will result in small and low-volume hospitals being scored more fairly.

Comment: Some commenters supported and favored the Equal Measure Weights approach, but also supported the Variable Domain Weights approach over the current methodology. These commenters believed that either proposal would result in a more equitable and useful scoring methodology for all hospitals.

Response: We thank the commenters for their support of either proposed approach. We agree that either approach could improve the current methodology, but the Equal Measure Weights approach remains our preferred approach.

Comment: One commenter supported the Equal Measure Weights approach for the scoring methodology, but requested that CMS run hospital level preview reports before implementation.

Response: We thank commenter for this suggestion. We will review the feasibility of this suggestion with our contractors and provide an update through our normal outreach and communication methods. We also note that as part of public

reporting, hospitals will receive an HSR during the HAC Reduction Program's Scoring Calculations Review and Correction Period, usually in July, which is in advance of public reporting in January. This HSR would include the results using the new weighting approach and allow hospitals to review these results prior to public reporting or application of payment adjustments.

Comment: Some commenters supported the Equal Measure Weights approach but encouraged CMS to reexamine the Equal Measure Weights approach and Variable Domain Weights approach whenever it considers adding a new measure to ensure that the finalized approach does not unfairly penalize one type of hospital.

Response: We thank the comment for this suggestion. We strive for continuous improvement in the HAC Reduction Program and will continue to monitor the unintended consequences of our policies.

Comment: Some commenters supported the Variable Domain Weights approach over the Equal Measure Weights approach because they believed that the Variable Domain Weights approach could reduce the emphasis on the CMS PSI 90 measure.

Response: We thank the commenters for their support of the Variable Domain Weights approach. We note that we continue to believe the CMS PSI-90 measure is a valuable measure for the HAC Reduction Program, and part of our reasoning in proposing new scoring methodologies is to facilitate scoring more evenly across measures.

Comment: A few commenters recommended retaining the current scoring methodology because they believe that using the new methodologies would negatively

impact large teaching and urban hospitals. A few commenters also believed that the Variable Domain Weights approach was the same as the current methodology.

Response: We thank the commenters for their feedback. We proposed the Equal Measure Weights approach to create a more equitable approach for all hospitals and closer align payment to performance as directed under our statutory requirements.

Comment: Some commenters opposed both the Equal Measure Weights approach and the Variable Domain Weights approach, while others simply expressed concerns, because the commenters believed that both approaches, as well as CMS' attempt to reduce the effect of the program on low-volume hospitals, could result in increased penalties on other hospital groups, including teaching hospitals, large hospitals, and hospitals caring for larger numbers of disadvantaged patients.

Response: We thank the commenters for their comments. We will continue to review unintended consequences of our policies. As with any proposal, some hospitals may benefit more than others. We believe that the Equal Measure Weights approach is more equitable for most hospitals as compared to the current methodology to implement our statutory requirement to link payment to eligible hospitals based on their Hospital Acquired Condition performance.

Comment: Some commenters urged CMS to further examine the unintended consequences of its proposed changes to the HAC Reduction Program methodology to mitigate any negative impact on essential hospitals.

Response: We thank the commenters for their feedback. We will continue to review unintended consequences of our policies.

Comment: A few commenters opposed both of the proposed methodologies because the commenters believed that small rural tribal hospitals will be penalized even with the proposed changes. The commenters explained that when volumes are low, shifting the weighting to measures where there are reported incidents serves only to artificially weight and enhance them, rather than giving the hospital its due credit for having zero incidents in other identified measures, either within the domains or among the two domains. The commenters suggested that CMS' use of "expected" events is contrary to the objectives of the program for small and rural hospitals, and suggested that if a low volume hospital has no events in previous years, the expected rate becomes very low. The commenters noted that one incident will then result in a very detrimental result for the hospital.

Response: We strive for continuous improvement in the HAC Reduction Program and will continue to monitor ways to improve the program. Though the impact to small tribal hospitals are minimal, this policy will decrease the number of small rural hospitals found in the worst-performing quartile. We are also working with the CDC to identify additional changes to measure specifications included in the program that could enhance program participation for smaller hospitals.

Comment: Some commenters urged CMS to consider additional changes to the HAC Program beyond the measure domain weightings. Some commenters recommended that CMS work with the CDC to examine whether the number of expected infections hospitals must receive a score on the HAI measures could be lowered without compromising the measures' reliability and accuracy. Commenters believed that part of

the reason that many small hospitals do not have scores on the HAI measures is because their volumes are not sufficient to meet the threshold of one expected infection. By lowering the threshold, the commenters said, CMS may be able to score smaller hospitals on a wider variety of HAI measures. Commenters also urged CMS to work with stakeholders on analysis and make the impact of changing the threshold available for public review and comment.

Response: Earlier this year, the HAC Reduction Program performed an analysis of the approach encouraged by these commenters. Our preliminary findings did not demonstrate the anticipated impact, and tended to exacerbate the scoring issues associated with low-volume and small hospitals. As such, we continue to believe that the current number of expected infections is ideal to maintain appropriate reliability and accuracy. CMS will continue to work with CDC on approaches to address the commenters concerns. We seek to optimize the participation of low volume facilities while maintaining reliability and validity.

Comment: One commenter expressed concern about CMS' proposals to remove measures from the Hospital IQR Program and adopt them in the HAC Reduction Program. The commenter asserted that, because HAC Reduction Program does not provide incentives for hospitals to submit quality measure data, removing measures from Hospital IQR Program and adopting them in HAC Reduction Program may imperil our quality data collection efforts, as hospitals would not have any incentive to submit the data needed to assess hospitals under HAC Reduction Program.

Response: We would like to clarify that the HAC Reduction Program is established by statute and its measure set is not limited to those measures adopted under the Hospital IQR Program. While we understand the commenter's concern, we note that hospitals that fail to report quality measure data for HAC Reduction Program purposes will be assessed the worst possible score for those measures, and we continue to believe that incentive to be sufficient to ensure that all eligible hospitals submit all required data to the HAC Reduction Program.

Comment: Some commenters offered alternative scoring methodologies. Some recommended that CMS consider alternatives either focusing on improving the measures or comparing hospitals based upon the number of measures scores they have. The commenters suggested that a measure improvement approach might, for example, consider changes to the measures themselves that would result in smaller hospitals being more likely to have measure scores on the NHSN measures in Domain 2 (such as reducing the number of qualifying infection events to less than 1). The commenters suggested that a more systematic approach would be to modify the program's scoring such that it is comparing cohorts of hospitals based upon the measures for which they have scores (rather than comparing performance across varying measure score completeness).

Response: We thank the commenters for their comments. We have considered several scoring options where cohorts of hospitals were compared based on the measures and domains for which they have scores. These options were: (1) extremely complicated resulting in a lack of transparency, parsimony and program score results; or (2) yielded

minimal impact in improving the inclusion of small hospitals. We will continue to explore methods for improving the program and will look further into these comments raised.

Comment: Some commenters recommended that CMS ensure that the methodology and quality measures in the HAC Reduction Program are tailored to measure hospitals' improvements on HACs accurately and do not disproportionately penalize certain types of hospitals.

Response: We interpret the commenter's comment to suggest that the HAC Reduction Program could account for hospitals' improvement on HACs. However, the HAC Reduction Program's statutory authority does not allow us to provide incentive payments for improvement.

After consideration of the public comments we received, we are finalizing our policy to adopt an Equal Measure Weights scoring methodology beginning in FY 2020.

#### 6. Applicable Period for FY 2021

Consistent with the definition specified at § 412.170, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20437), we proposed to adopt the applicable period for the FY 2021 HAC Reduction Program for the CMS PSI 90 as the 24-month period from July 1, 2017 through June 30, 2019, and the applicable period for NHSN HAI measures as the 24-month period from January 1, 2018 through December 31, 2019.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38271), we finalized a return to a 24-month data collection period for the calculation of HAC Reduction Program measure results. As we stated then, we believe that using 24 months of data for the CMS

PSI 90 and the NHSN HAI measures balances the Program's needs against the burden imposed on hospitals' data-collection processes, and allows for sufficient time to process the data for each measure and calculate the measure results.

Comment: Commenters supported the proposed applicable period for FY 2021.

Response: We thank the commenters for their support.

After consideration of the public comments we received, we are finalizing, consistent with 42 CFR 412.170, the applicable period for the FY 2021 HAC Reduction Program for the CMS PSI 90 as the 24-month period from July 1, 2017 through June 30, 2019, and the applicable period for NHSN HAI measures as the 24-month period from January 1, 2018 through December 31, 2019.

#### 7. Request for Comments on Additional Measures for Potential Future Adoption

As we did in the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19986 through 19990), and as part of our ongoing efforts to evaluate and strengthen the HAC Reduction Program, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20437), we sought stakeholder feedback on the adoption of additional Program measures.

We welcomed public comment and suggestions for additional HAC Reduction Program measures, specifically on whether electronic clinical quality measures (eQMs) would benefit the program at some point in the future. We first raised the potential future consideration of electronically specified measures in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50104), and stated that we would continue to review the viability of including electronic measures. We are now specifically interested in stakeholder comments regarding the potential for the Program's future adoption of eQMs. These measures use

data from electronic health records (EHRs) and/or health information technology systems to measure health care quality. We believe eCQMs will allow for the improved measurement of processes, observations, treatments and outcomes. Measuring and reporting eCQMs provide information on the safety, effectiveness, and timeliness of care. We are also interested in adopting eCQMs because we support technology that reduces burden and allows clinicians to focus on providing high-quality healthcare for their patients. We also support innovative approaches to improve quality, accessibility, and affordability of care while paying attention to improving clinicians' and beneficiaries' experience when interacting with CMS programs. We believe eCQMs offer many benefits to clinicians and quality reporting and are an improvement over traditional quality measures because they leverage the EHR to generate chart-abstracted data, which is less resource intensive and likely to produce fewer human errors than traditional chart-abstraction.

We believe that our continued efforts to reduce HACs are vital to improving patients' quality of care and reducing complications and mortality, while simultaneously decreasing costs. The reduction of HACs is an important marker of quality of care and has a positive impact on both patient outcomes and cost of care. Our goal for the HAC Reduction Program is to heighten the awareness of HACs and reduce the number of incidences that occur.

Comment: Commenters strongly recommended that all new measures, including eCQMs, be NQF-endorsed, approved by the MAP, scientifically valid, reliable, and feasible, and that such measures be reviewed to determine whether they are appropriate

for review in the NQF SDS trial period. Commenters also believed new measures should be evaluated within the Meaningful Measures Initiative framework and appropriate corresponding measure removals should be considered to balance a measure's addition. A commenter opposed additional claims-based measures because claims data does not demonstrate if the standard of care was met and are not actionable improve care delivery and outcomes. Other commenters believed that although claims-based reporting is far from a perfect assessment of care quality, elimination of these measures could create a significant risk to patient safety. Many commenters believed that the HAC Reduction Program should not directly adopt new measures, including eCQMs, into the program without providing stakeholders to gain opportunity to familiarize themselves with a measure before it is used to determine their Medicare payments.

Most commenters believed that hospitals should have the measure publicly reported for at least a year without penalty. Some commenters suggested that this should be accomplished by including measures in the Hospital IQR Program prior to adopting them to the HAC Reduction Program, or by reported on them *Hospital Compare* for a year, or by creating a reporting only category within the HAC Reduction Program. These commenters urged CMS to give hospitals time to become accustomed to reporting and measuring these items before implementation.

Response: We thank the commenters for their feedback.

Comment: One commenter suggested the HAC Reduction Program consider telemedicine, patient reported data and wearables. Another commenter recommended that CMS use its data to identify at risk-patients before they are in a disease state.

Response: We thank the commenter for their suggestions. As a statutory requirement, the HAC Reduction Program can only include measures that assess conditions that are hospital-acquired (that is, not present on admission) while a patient in the inpatient hospital setting.

Comment: A few commenters recommended that CMS consider adding a measure to account for surgical site infections associated with hip and knee replacement surgeries for inpatient and outpatient procedures using NHSN measures. Another commenter recommended adding a measure to address the inappropriate overuse of antibiotics and infection prevention practices.

Response: We thank the commenters for their feedback.

Comment: A number of commenters supported eCQMs for the reporting of HAC Reduction Program measures and stated that such measures would be beneficial. One commenter expressed optimism that electronically reported data elements could provide more accurate, informative, and timely information about clinical care for patients.

Response: We thank the commenters for their comments in support of the potential for eCQMs in the HAC Reduction Program.

Comment: Commenters encouraged CMS to consider adopting NQF-endorsed measures and to ensure that they have reliable risk-adjustment. One commenter believed eCQMs can be risk adjusted to account for socioeconomic status and health history for appropriate national comparisons of care.

Response: We thank the commenters for their comments.

Comment: A commenter urged that, prior to adopting any eCQMs for the HAC Reduction Program: those eCQMs must be thoroughly tested for validity, reliability, and feasibility and determined to produce comparable and consistent results; the data elements should be accurately and efficiently gathered in the healthcare provider workflow, using data elements already collected as part of the care process and stored in EHRs or other interoperable clinical and financial technology; and that the eCQMs should provide an accurate reflection of care delivered, and be actionable to drive meaningful improvements in care delivery.

Response: We thank the commenter for its feedback. Any measure proposed for the HAC Reduction Program would be assessed to ensure that it is a reliable, valid, and appropriate measure for the Program. In addition, any measure proposed would be subject to CMS' pre-rulemaking and rulemaking process before being adopted in the HAC Reduction Program, providing multiple opportunities for stakeholder comment and input.

Comment: Some commenters believed that eCQMs could reduce reporting burden; although some cautioned about the potential for inherent incongruities between claims codes and the quality of care provided to the patient when using eCQMs instead of claims quality measurement. The commenters recommended that any additions be done thoughtfully and with regard to alignment, timeliness of implementation, and the amount of burden that will be incurred.

Response: We thank the commenters for their comments and will take them into consideration should CMS decide to pursue an eCQM for the HAC Reduction Program.

Comment: Commenters opposed the addition of measures simply for the sake of having eQMs and noted that such an approach would not be helpful.

Response: We thank the commenters for their comments about the potential future use of eQMs in the HAC Reduction Program.

Comment: Commenters encouraged CMS to consider alignment, timing, and the amount of burden associated with a given eQm. Commenters believed that eQm implementation needs to allow time for this development work, and that CMS set realistic timeframes.

Response: We thank the commenters for their comments and will take them into consideration should CMS decide to pursue an eQm for the HAC Reduction Program.

Comment: Some commenters believed the HAC Reduction Program's measures should clearly support improving the patient experience of care (including quality, outcomes, and satisfaction). Other commenters recommended focusing on preventable common medical errors for which the HAC Reduction Program has few measures, such as medication errors. Some commenters supported the development of outcomes-driven clinical quality measures that can be extracted from electronic clinical data

Response: We thank the commenters for their suggestions. Measures for the HAC Reduction Program, by statutory authority, must address conditions that are hospital-acquired and were not present-on-admission. As such, measures assessing patient experience of care, satisfaction, and other similar types of measures would not be appropriate for the HAC Reduction Program.

Comment: A number of commenters expressed caution about adopting eCQMs into the HAC Reduction Program because they believed there are still required improvements for eCQMs. Some commenters were concerned with that different vendors may not have equivalent eCQMs from system to system, and believed that because of this variability, it would be unfair to base hospital reimbursement on measures where performance may simply be a function of which electronic health record vendor a facility is using.

Response: We thank the commenters for their comments and will take them into consideration should CMS decide to pursue an eCQM for the HAC Reduction Program.

Comment: A commenter believes that eCQMs should not be considered for inclusion in HAC Reduction Program because eCQMs are costly and labor intensive to report and CMS has sent conflicting signals with respect to eCQMs. The commenter noted that CMS is proposing to retire nearly half of the current eCQM metrics and requests clear direction in order to minimize reporting expenses.

Response: We thank the commenter for their comments about the future use of eCQMs in the HAC Reduction Program.

Comment: Commenters noted that seeking EHR input early in the measure development process can help set realistic expectations for feasibility of EHR data collection, timeline and cost. Commenters recommended that CMS: collaborate with accreditation organizations (for example, The Joint Commission), private payers, and States to develop consensus; support a core measure set that closely aligns to the CMS

eCQM menu set; standardize set of vendor-agnostic tools and notes to auto feed quality data elements.

Response: We thank the commenters for their comments about eCQMs and will take these suggestions under advisement as we continue to work on eCQMs.

Comment: Some commenters recommended that eCQMs should be selected based on data elements that are already used in electronic health records. A commenter expressed concern that it is difficult to capture an infection upon admission as a discrete data element in an electronic health record. Other commenters expressed concern about current eCQMs' degree of accuracy particularly with surgical procedures and risk-adjustment factors. A commenter expressed the need for quality abstractors to work closely with coders to ensure that the measure specifications and coding support the quality measure's specifications.

Response: We thank the commenters for their comments and will take them into consideration.

Comment: A commenter recommended having a thorough validation process of any eCQMs. Others encouraged CMS to postpone adding eCQMs to payment programs until the first period of eCQM validation is complete under the Hospital IQR Program. Another commenter requested that CMS focus on addressing current concerns with eCQM reporting rather than on developing additional eCQMs for inclusion in hospital reporting programs for the future. Other commenters recommended that CMS focus on the inclusion of a small number of measures in the eCQM program that are meaningful

and not overly burdensome will provide hospitals with additional time and bandwidth to address the considerable challenges of electronic data reporting.

Response: We thank the commenters for their comments about eCQMs and we will take them into consideration.

Comment: Several commenters encouraged the advancement of standards for Certified EHR Technology (CEHRT) to better support measure development.

Commenters also encouraged interoperability and the establishment of electronic health record data standards to ensure measures can be assessed comparably across systems.

Response: We thank the commenters for their comments about CEHRT to support measure development. We will take these into consideration.

Comment: Commenters recommended that CMS incentivize, perhaps through scoring bonuses, the development and testing of new eCQMs.

Response: We thank the commenters for their views and will take them into consideration as we continue to explore additional measures for potential future adoption.

K. Payments for Indirect and Direct Graduate Medical Education Costs (§§ 412.105 and 413.75 through 413.83)

1. Background

Section 1886(h) of the Act, as added by section 9202 of the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 (Pub. L. 99–272), establishes a methodology for determining payments to hospitals for the direct costs of approved graduate medical education (GME) programs. Section 1886(h)(2) of the Act sets forth a methodology for the determination of a hospital-specific base-period per resident amount (PRA) that is calculated by dividing a hospital’s allowable direct costs of GME in a base period by its number of full-time equivalent (FTE) residents in the base period. The base period is, for most hospitals, the hospital’s cost reporting period beginning in FY 1984 (that is, October 1, 1983 through September 30, 1984). The base year PRA is updated annually for inflation. In general, Medicare direct GME payments are calculated by multiplying the hospital’s updated PRA by the weighted number of FTE residents working in all areas of the hospital complex (and at nonprovider sites, when applicable), and the hospital’s Medicare share of total inpatient days. The provisions of section 1886(h) of the Act are implemented in regulations at 42 CFR 413.75 through 413.83.

Section 1886(d)(5)(B) of the Act provides for a payment adjustment known as the indirect medical education (IME) adjustment under the IPPS for hospitals that have residents in an approved GME program, in order to account for the higher indirect patient care costs of teaching hospitals relative to nonteaching hospitals. The regulation regarding the calculation of this additional payment is located at 42 CFR 412.105. The

hospital's IME adjustment applied to the DRG payments is calculated based on the ratio of the hospital's number of FTE residents training in either the inpatient or outpatient departments of the IPPS hospital to the number of inpatient hospital beds.

The calculation of both direct GME and IME payments is affected by the number of FTE residents that a hospital is allowed to count. Generally, the greater the number of FTE residents a hospital counts, the greater the amount of Medicare direct GME and IME payments the hospital will receive. Therefore, Congress, through the Balanced Budget Act of 1997 (Pub. L. 105–33), established a limit (that is, a cap) on the number of allopathic and osteopathic residents that a hospital may include in its FTE resident count for direct GME and IME payment purposes. Under section 1886(h)(4)(F) of the Act, for cost reporting periods beginning on or after October 1, 1997, a hospital's unweighted FTE count of residents for purposes of direct GME may not exceed the hospital's unweighted FTE count for direct GME in its most recent cost reporting period ending on or before December 31, 1996. Under section 1886(d)(5)(B)(v) of the Act, a similar limit based on the FTE count for IME during that cost reporting period is applied effective for discharges occurring on or after October 1, 1997. Dental and podiatric residents are not included in this statutorily mandated cap.

## 2. Changes to Medicare GME Affiliated Groups for New Urban Teaching Hospitals

Section 1886(h)(4)(H)(ii) of the Act authorizes the Secretary to prescribe rules that allow hospitals that form affiliated groups to elect to apply direct GME caps on an aggregate basis, and such authority applies for purposes of aggregating IME caps under section 1886(d)(5)(B)(viii) of the Act. Under such authority, the Secretary promulgated

rules to allow hospitals that are members of the same Medicare GME affiliated group to elect to apply their direct GME and IME FTE caps on an aggregate basis. As specified in §§ 412.105(f)(1)(vi) and 413.79(f) of the regulations, hospitals that are part of the same Medicare GME affiliated group are permitted to apply their IME and direct GME FTE caps on an aggregate basis, and to temporarily adjust each hospital's caps to reflect the rotation of residents among affiliated hospitals during an academic year. Sections 413.75(b) and 413.79(f) specify the rules for Medicare GME affiliated groups.

Generally, two or more hospitals may form a Medicare GME affiliated group if the hospitals have a shared rotational arrangement and are either located in the same urban or rural area or in contiguous urban or rural areas, are under common ownership, or are jointly listed as program sponsors or major participating institutions in the same program. Sections 413.75(b) and 413.79(f) also address emergency Medicare GME affiliation agreements, which can apply in the event of a section 1135 waiver and if certain conditions are met.

For a new urban teaching hospital that received an adjustment to its FTE cap under § 412.105(f)(1)(vii) or § 413.79(e)(1), or both, § 413.79(e)(1)(iv) provides that the new urban hospital may enter into a Medicare GME affiliation agreement only if the resulting adjustment is an increase to its direct GME and IME FTE caps (for purposes of this discussion, the term "urban" is defined as that term is described at § 412.64(b) of the regulations). We adopted this policy in the FY 2006 IPPS final rule (70 FR 47452 through 47454). Prior to that final rule, new urban teaching hospitals were not permitted to participate in a Medicare GME affiliation agreement (63 FR 26333). In modifying our

rules to allow new urban teaching hospitals to participate in Medicare GME affiliation agreements, we noted our concerns about such affiliation agreements (70 FR 47452). Specifically, we were concerned that hospitals with existing medical residency training programs could otherwise, with the cooperation of new teaching hospitals, circumvent the statutory FTE caps by establishing new medical residency programs in the new teaching hospitals solely for the purpose of affiliating with the new teaching hospitals to receive an upward adjustment to their FTE caps under an affiliation agreement. This would effectively allow existing teaching hospitals to achieve an increase in their FTE resident caps beyond the number allowed by their statutory caps (70 FR 47452). Accordingly, we adopted the restriction under § 413.79(e)(1)(iv). We refer readers to the FY 2006 IPPS final rule for a discussion of the regulatory history of this provision (70 FR 47452 through 47454).

As we discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20438), we have received questions about whether two (or more) new urban teaching hospitals can form a Medicare GME affiliated group; that is, whether an affiliated group consisting solely of new urban teaching hospitals is permissible, considering that, under § 413.79(e)(1)(iv), a new urban teaching hospital may only enter into a Medicare GME affiliation agreement if the resulting adjustments to its direct GME and IME FTE caps are increases to those caps. The type of Medicare GME affiliated group allowed under the current regulation at § 413.79(e)(1)(iv) involves an existing teaching hospital(s) (a hospital with caps based on training occurring in 1996) and a new teaching hospital(s) (a hospital with caps established after 1996), and therefore, we do not believe a Medicare

GME affiliation agreement consisting solely of new urban teaching hospitals is permissible under § 413.79(e)(1)(iv). However, as we stated in the proposed rule, we believe it is important to provide flexibility with regard to Medicare GME affiliation agreements in light of the statutorily mandated caps on the number of FTE residents a hospital may count for direct GME and IME payment purposes. As we noted in the FY 2006 IPPS final rule, while the rules we established in § 413.79(e)(1)(iv) were meant to prevent gaming on the part of existing teaching hospitals, we did not wish to preclude affiliations that clearly are designed to facilitate additional training at a new teaching hospital. We believe allowing two (or more) new urban teaching hospitals to form a Medicare GME affiliated group will enable these hospitals to provide residents training at their facilities with both the required and more varied training experiences necessary to complete their residency training programs. Furthermore, we believe a change will facilitate increased training within local, smaller-sized communities because generally new urban teaching hospitals are smaller-sized, community-based hospitals compared with existing urban teaching hospitals, which are generally large academic medical centers. Accordingly, under our authority in section 1886(h)(4)(H)(ii) of the Act, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20439), we proposed to revise the regulation to specify that new urban teaching hospitals (that is, hospitals that qualify for an adjustment under § 412.105(f)(1)(vii) or § 413.79(e)(1), or both) may form a Medicare GME affiliated group and therefore be eligible to receive both decreases and increases to their FTE caps.

In the proposed rule, we emphasized that the existing restriction under § 413.79(e)(1)(iv) would still apply to Medicare GME affiliated groups composed of existing and new urban teaching hospitals, given our concerns about gaming. We stated that we do not share the same level of concern in regards to Medicare GME affiliated groups consisting solely of new urban teaching hospitals because we believe these teaching hospitals are similarly situated in terms of size and scope of residency training programs and, therefore, less likely to participate in a Medicare GME affiliated group where the outcome of that agreement would only provide advantages to one of the participating hospitals. However, we still believe it is important to ensure that Medicare GME affiliation agreements entered into between new urban teaching hospitals are consistent with the intent of the Medicare GME affiliation agreement provision; that is, to promote the cross-training of residents at the participating hospitals and not to provide for an unfair advantage of one participating hospital at the expense of another hospital.

Therefore, we proposed to revise § 413.79(e)(1)(iv) by designating the existing provision of paragraph (iv) as paragraph (A) and adding paragraph (B) to specify that an urban hospital that qualifies for an adjustment to its FTE cap under this section is permitted to be part of a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap and receive an adjustment that is a decrease to the urban hospital's FTE cap only if the decrease results from a Medicare GME affiliated group consisting solely of two or more urban hospitals that qualify to receive adjustments to their FTE caps under paragraph (e)(1). Because Medicare GME affiliation agreements can only be entered into at the start of an academic year (that is, July 1), we proposed that this change

would be effective beginning with affiliation agreements entered into for the July 1, 2019 through June 30, 2020 residency training year. We noted that, if the proposed change is adopted in the final rule, it would apply to both Medicare GME affiliation agreements and emergency Medicare GME affiliation agreements.

Comment: Commenters supported the proposed change to the regulations to allow new urban teaching hospitals to form a Medicare GME affiliated group(s) and therefore be eligible to receive decreases to their FTE caps. The commenters stated that the proposal would provide flexibility under the statutorily mandated cap and would support the cross-training of residents. One commenter expressed appreciation for the proposal and specifically referenced the need for residency positions in Florida by stating that Florida is ranked near the bottom of the nation (42nd) by the Association of American Medical Colleges (AAMC) in the number of medical residency positions per 100,000 people (18.8 residents per 100,000 versus 26.2 nationally) and currently has a shortage of more than 800 residency positions available in relation to the number of graduate medical students. Other commenters stated the proposal would provide residents with required and more diverse training experiences, allow residents to train where previously they were unable due to the current restrictions, and fill residencies where needed, which in turn will provide for a better workforce pipeline. Another commenter stated that allowing teaching hospitals to combine resources responds to two needs, growing and training the physician workforce and improving patient access, which are both key factors in improving health care and access to health care. One commenter supported the proposed change and requested CMS continue to support to GME

programs, specifically to allow urban teaching hospitals to partner with rural hospitals to incentivize those relationships to be mutually beneficial to both hospitals and improve access to care in rural areas.

Response: We appreciate the commenters' support of the proposed policy. As discussed later in this preamble, we are finalizing our proposal with modification. In response to the comment regarding partnerships between urban and rural teaching hospitals, we refer readers to the most recent discussion of rural tracks included in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57027 through 57031).

Comment: Commenters requested that CMS clarify the term "new teaching hospital" as it relates to the proposed provision. The commenters stated that CMS defines the term "new teaching hospital" as referring to hospitals that started training residents after 1996, more than 20 years ago. However, the commenters added, to the medical community, "new teaching hospital" is a hospital still in its cap-building period. The commenters requested that CMS confirm the proposed provision is meant to apply to hospitals that have already established an FTE cap(s).

Response: In the proposed rule (83 FR 20439), we referred to new urban teaching hospitals as hospitals that qualify for an adjustment under § 412.105(f)(1)(vii) or § 413.79(e)(1), or both. These regulations describe how caps are calculated for a hospital that had no allopathic or osteopathic residents in its most recent cost reporting period ending on or before December 31, 1996 and begins training residents in a new medical residency training program(s) for the first time on or after January 1, 1995. (Specifically, a new medical residency training program is defined in regulation at § 413.79(l) as a

medical residency program that receives initial accreditation by the appropriate accrediting body or begins training residents on or after January 1, 1995.) We also refer readers to the FY 2010 IPPS/LTCH PPS final rule where we discuss the definition of new medical residency training program (74 FR 43908 through 43917). Therefore, the commenter is correct that a new teaching hospital would include a hospital that started training residents more than 20 years ago because the term “new teaching hospital” includes both a hospital that already completed its cap-building period and received its own permanent FTE caps (based on training residents in a new program(s) that received initial accreditation or began on or after January 1, 1995), or a hospital that some point in the future will for the first time train residents in a new program and complete its cap-building period and receive its own permanent FTE caps.

In response to the request that CMS confirm that the proposed provision was meant to apply to hospitals that have already established FTE caps, we note that the proposal, which we are finalizing, to allow a new urban teaching hospital to be part of a Medicare GME affiliated group composed solely of new urban teaching hospitals requires that a least one of the new urban teaching hospitals participating in the Medicare GME affiliated group has established FTE caps. (As explained further below, our proposal does not require that all participating hospitals have established FTE caps.) If a Medicare GME affiliated group were to consist solely of new urban teaching hospitals that do not have established FTE caps, there would be no cap amounts to transfer under the agreement. In addition, we note that when a new teaching hospital is within the cap-building period for a new program(s), the hospital’s caps are not yet established and it is

paid for IME and direct GME based on its actual count of FTE residents in the new program (§ 413.79(e)(1)(ii)). Because these FTEs are not capped, they cannot be decreased under a Medicare GME affiliation agreement.

However, the proposal was not meant to exclude new teaching hospitals that do not yet have FTE caps established from participating in a Medicare GME affiliated group. Rather, such hospitals have always been able to participate in a Medicare GME affiliated group as long as these hospitals are the entities receiving increases to their FTE caps of zero under the affiliation agreement(s). For example, under our proposal, a new urban teaching hospital that does not yet have FTE caps could receive an increase to its FTE caps of zero through a Medicare GME affiliation agreement wherein it is training residents in an existing program coming from a new urban teaching hospital that has permanent FTE caps. In such a scenario, the new urban teaching hospital with permanent FTE caps would be decreasing its FTE caps such that the other new urban teaching hospital, which does not have FTE caps of its own, would have temporary FTE caps above zero and could receive IME and direct GME payment for the residents rotating in from the existing program.

Comment: One commenter opposed CMS' interpretation that Medicare GME affiliation agreements consisting solely of new urban teaching hospitals are not permissible under § 413.79(e)(1)(iv). The commenter stated that when growing the physician workforce is a priority in improving health care, CMS should be looking at facilitating and incentivizing this goal. The commenter stated that it had long supported efforts to increase the 1996 caps and urged CMS and Congress to lift the caps on GME

for hospitals in order to update and modernize the training and recruitment of physicians. In lieu of increased funding for GME, the commenter urged CMS to look at ways to increase GME caps under existing regulations.

Response: We disagree with the commenter that affiliation agreements consisting solely of new urban teaching hospitals are permissible under § 413.79(e)(1)(iv). These regulations state the following: “(e)ffective for Medicare GME affiliation agreements entered into on or after October 1, 2005, an urban hospital that qualifies for an adjustment to its FTE cap under paragraph (e)(1) of this section is permitted to be part of a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap only if the adjustment that results from the affiliation is an increase to the urban hospital’s FTE cap.” The language means that a new urban teaching hospital can only be part of a Medicare GME affiliated group if it receives an increase to its FTE cap; that is, receives cap slots from another hospital. In order to allow for the transfer of FTE cap slots under a Medicare GME affiliation agreement, there would need to be a hospital that receives a decrease to its caps; that is, lends cap slots to another hospital. Therefore, under current regulations, Medicare GME affiliation agreements cannot consist solely of new urban teaching hospitals.

In response to the request that CMS look for ways to increase FTE caps under current regulations, we note that the current regulations do provide some means of establishing and increasing FTE resident caps. New urban and rural teaching hospitals that do not have caps established can receive permanent FTE caps when they train residents in a new program after a 5-year cap-building period (§§ 413.79(e) and

412.105(f)(1)(vii)). Furthermore, both new and existing rural teaching hospitals that train residents in a new program receive an increase to their permanent FTE caps each time they train residents in a new program (§ 413.79(e)(3)). Urban teaching hospitals that participate in a rural track program can receive an add-on to their permanent FTE caps for the time the residents spend training at the urban teaching hospital as part of the rural track program (§§ 412.105(f)(x) and 413.79(k)) (we refer readers to the August 22, 2016 **Federal Register** (81 FR 57027) for a discussion of rural tracks). Lifting hospitals' 1996 caps would require legislation.

Comment: Two commenters supported the proposed change to allow Medicare GME affiliated groups to consist solely of new urban teaching hospitals. However, these commenters also requested that CMS provide additional flexibilities, and they proposed several policy alternatives for CMS to consider.

One commenter stated the practicality of two new teaching hospitals in close vicinity to have shared rotational arrangements is minimal. The commenter understood and appreciated CMS' concern that some teaching hospitals with existing medical residency training programs may try and circumvent the statutory FTE caps by establishing new residency training programs at new teaching hospitals solely for the purposes of affiliation. However, the commenter stated that, under these restrictions, CMS limits the ability to cross-train future physicians, especially in multihospital settings in rural areas. The commenter stated many "new" teaching hospitals started training programs after the 1996 caps were established, and these hospitals have since become associated with larger teaching hospitals and medical schools. The commenter suggested

that after a specified time-period in which the new teaching hospital first began training residents, CMS allow a new teaching hospital to lend cap slots to existing teaching hospitals that are part of related organizations. The commenter suggested a 10-year waiting period, which is consistent with the length of time a hospital must remain reclassified as rural in order to retain any increases to its IME cap associated with being rural, as described in the regulations at § 412.105(f)(1)(xv).

Response: We appreciate the commenter's suggestion to provide additional flexibility for new urban teaching hospitals under the Medicare GME affiliation agreement regulations. However, we disagree with the commenter's proposal that after a 10-year period, CMS should allow a new urban teaching hospital to lend cap slots to an existing teaching hospital that is part of a related organization. It may be administratively difficult for CMS and its contractors to ensure that the new teaching hospital is participating in an agreement with an existing teaching hospital(s) that is part of a related organization. Ensuring that the term "related organizations" is applied consistently would require additional rulemaking.

Comment: One commenter believed CMS' overall concern regarding Medicare GME affiliation agreements as expressed in the FY 2019 IPPS/LTCH PPS proposed rule is misplaced, and that there is no need for CMS to protect "smaller-sized, community-based hospitals" from existing teaching hospitals. The commenter stated a Medicare GME affiliation agreement is a voluntary contractual arrangement between two organizations with two distinct Medicare provider numbers and Medicare provider agreements. The commenter noted it has worked with many of its member teaching

hospitals--large and small, public and private, urban and suburban--on Medicare GME affiliation agreements and has not encountered a situation where any one of these hospitals was not entering into the agreement of its own free will, ensuring that its own interests are met through the affiliation agreement.

Response: We continue to believe it is important to ensure that the intent of Medicare GME affiliation agreements is met; that is, Medicare GME affiliation agreements are in place to promote the cross-training of residents at the participating hospitals and not to provide for an unfair advantage of one participating hospital at the expense of another hospital. However, we appreciate hearing that the commenter has not encountered situations where a Medicare GME affiliation agreement has only benefited one or some of the participating hospitals, particularly because a Medicare GME affiliation agreement is a voluntary contractual arrangement.

Comment: One commenter stated that, as part of CMS' new teaching hospital rulemaking and policy clarification (74 FR 43908), CMS has specified that, among other requirements, a new teaching hospital must establish new programs with new residents in order to build direct GME and IME FTE caps. The commenter stated that, under these requirements, CMS has essentially prohibited an existing teaching hospital from entering in a Medicare GME affiliation agreement with a new teaching hospital in order to circumvent its statutory FTE caps. The commenter questioned why the new program requirements for new teaching hospitals combined with a time-based restriction on Medicare GME affiliation agreements would not be sufficient to achieve CMS' policy goals. The commenter noted that, in 2006 and in the FY 2019 IPPS/LTCH PPS proposed

rule, CMS has granted/is granting some small flexibility to new teaching hospitals, some of which have had caps for over a decade. Therefore, the commenter believed that CMS does not seem concerned about these new teaching hospitals (that have had FTE caps for over a decade) circumventing their statutory caps. The commenter questioned why, if CMS is willing to grant flexibility to allow new teaching hospitals to lend slots to other new teaching hospitals that have had FTE caps for well over a decade, CMS cannot grant the same flexibility to new teaching hospitals to lend FTE cap slots to hospitals with 1996 caps that are similarly situated in the community.

Response: If we understand the commenter correctly, the commenter is stating that in order to receive FTE caps a new teaching hospital must train residents in a new program (which is comprised of new residents, new teaching staff, and a new program director), and that because the involvement of an existing teaching hospital would call into question the “newness” of that program, an existing teaching hospital would be prevented from using a new teaching hospital’s FTE caps for its own purposes. We do not believe this argument is applicable to both our proposed policy and the policy finalized in this final rule. That is, as explained above, a new teaching hospital that is within its cap-building period for a new program(s) cannot use those slots as part of a Medicare GME affiliation agreement during that cap-building period anyway (regardless of an increase or decrease) because those slots are not yet permanent cap slots. Rather, our proposed and final policies instead focus on expanding the flexibility of new teaching hospitals entering into Medicare GME affiliation agreements *after* its FTE caps are permanently set.

Comment: One commenter stated CMS did not provide data to support its claims that existing urban teaching hospitals are generally large academic medical centers and that new urban teaching hospitals differ in size from existing urban teaching hospitals. The commenter reported that it had analyzed data included in the Hospital Cost Report Information System (HCRIS) using FY 2016 cost reports to try to verify the validity of CMS' claims. The commenter stated that because there is no standard definition of academic medical center (the term generally refers to a large hospital closely affiliated with a medical school), for purposes of the analysis, the commenter defined an academic medical center as a teaching hospital with at least 500 beds. Based on the commenter's analysis, only 22.7 percent of hospitals training residents in 1996 had 500 or more available beds. The commenter stated that, in total, 72.8 percent of existing teaching hospitals that reported training residents in 1996 had between 100 and 500 available beds, and therefore would not be considered a "large academic medical center." Therefore, the commenter disagreed with CMS' assertion that existing teaching hospitals are generally large academic medical centers. The commenter stated that, based on its analysis, 22 percent of existing teaching hospitals had between 100 and 200 available beds, and another 22 percent of existing teaching hospitals had between 200 and 300 available beds. The commenter noted that, of the hospitals that received caps after 1996, 81.9 percent of these hospitals also had between 100 and 500 beds. Therefore, the commenter stated that, based on its analysis, the percentage of existing teaching hospitals and new teaching hospitals of the same size is within 10 points. The commenter noted that even though very small urban hospitals (fewer than 100 beds) were disproportionately

nonteaching hospitals in 1996 (and 40 percent remain nonteaching), the commenter's analysis indicates the vast majority of existing teaching hospitals and new teaching hospitals are not substantially different in size from each other. Therefore, the commenter disagreed with CMS' rationale that a distinction between existing teaching hospitals and new teaching hospitals is necessary and encouraged CMS to reconsider its policy regarding treating new teaching hospitals differently from existing teaching hospitals for purposes of Medicare GME affiliation agreements.

Response: We have not independently verified the commenter's analysis or performed a detailed cost report analysis for purposes of this proposal. However, even if many new teaching hospitals are approximately the same size as many existing teaching hospitals, we still believe a distinction can be made between existing teaching hospitals and those new teaching hospitals that have just started training residents, with the former having greater expertise in the logistics of running residency training programs than the latter. However, we are receptive to the commenter's concerns, and therefore, we are modifying our proposed policy, as explained further below, to provide greater flexibility for new urban teaching hospitals to affiliate with existing teaching hospitals.

Comment: One commenter stated that because "new" teaching hospitals could have started training residents as early as 1997, it does not seem appropriate to characterize a hospital that has been training residents for close to 20 years as "new" and use that as a basis to draw a distinction between that hospital and other hospitals in 2018. The commenter stated that, for this reason, it along with national colleagues and the provider community have encouraged CMS to provide flexibility to new teaching

hospitals after some reasonable period of time (for example, 5 years after the establishment of a cap, or 10 years after first training residents). The commenter stated that, at that point in time, it is difficult to reasonably still characterize the hospital as a “new” teaching hospital and hold the hospital to a different standard compared to--in CMS’ terminology--an “existing” teaching hospital.

The commenter also suggested a policy alternative that would be associated with putting a limit on the proportion of FTE cap slots a new teaching hospital could lend to an existing teaching hospital. The commenter suggested that CMS could simply limit the number of shared FTE cap slots to some reasonable percentage, thereby ensuring that the new teaching hospital’s cap generally “stays” with it. The commenter noted that, for example, CMS could specify that a new teaching hospital could enter into a Medicare GME affiliation agreement with an existing teaching hospital such that it may experience a decrease in its FTE cap but for no more than more than 20 percent of the new teaching hospital’s FTE cap slots. The commenter stated there is nothing explicit in the statute to guide the selection of a particular percentage. However, the commenter believed that such a policy determination would be well within CMS’ rulemaking authority.

The commenter discussed teaching hospitals located in the same health system. The commenter noted that that CMS’ extremely limited policy restrictions, even with the addition of the flexibility included within the FY 2019 IPPS/LTCH PPS proposed rule, seem extremely outdated in an era where hospitals are entering into system arrangements to create centers of excellence and to locate services where they best serve their communities. The commenter stated that for CMS to hold one teaching hospital within

an integrated delivery system to one set of Medicare GME affiliation agreement requirements and another teaching hospital within that same health system to a different set of requirements (seemingly to protect one from the other) is inconsistent with the intent of joint membership in the system. The commenter stated that CMS' current policy is contrary to the very notion of "systemness" and clinical/academic integration, which many health care leaders and policymakers are trying to promote as a means of improving quality of care for patients and improved training experiences for residents. Therefore, the commenter suggested that, in addition to the policy change included as part of the FY 2019 IPPS/LTCH PPS proposed rule, CMS, at a minimum, permit new urban teaching hospitals to enter into Medicare GME affiliation agreements with any existing teaching hospital under the same corporate parent whereby the existing urban teaching hospital could experience an increase to its FTE cap.

Response: We do not agree with the commenter's suggestion to allow a new urban teaching hospital to enter into a Medicare GME affiliation agreement with any existing teaching hospital under the same corporate parent wherein the new urban teaching hospital would experience a decrease to its FTE cap. We believe that understanding the hospitals' corporate structure for purposes of determining which hospitals can affiliate could prove to be administratively burdensome, and that corporate structures may change over time, which could call into question the validity of Medicare GME affiliation agreement structured under such an approach.

In response to the commenter's suggestion to permit a new urban teaching hospital to participate in a Medicare GME affiliation agreement and receive a decrease to

its FTE cap for a certain proportion of FTE cap slots, we believe it would be challenging to determine an appropriate percentage of FTE cap slots from a new urban teaching hospital that should be permitted to be transferred to an existing teaching hospital. Furthermore, an appropriate percentage may differ among new urban teaching hospitals based on their individual training needs, adding to the administrative complexity.

However, we do believe that a time-limited approach may provide new urban teaching hospitals the opportunity to receive decreases to their caps while at the same time addressing our concern that existing teaching hospitals not use new teaching hospitals to circumvent their FTE caps. Specifically, we believe that requiring a new urban teaching hospital to wait a certain period of time prior to lending its cap slots to an existing teaching hospital through a Medicare GME affiliation agreement (that is, the new urban teaching hospital would receive a decrease to its FTE caps as part of the affiliation agreement) would demonstrate that the new teaching hospital is, in fact, establishing and expanding its own new residency training programs rather than serving as a means for an existing teaching hospital to receive additional FTE caps. We further believe that a time-limited approach would be a more equitable way of providing new urban teaching hospitals with the opportunity to decrease their FTE caps instead of using a percentage of slots or determining whether a new urban teaching hospital falls under the same corporate structure as an existing teaching hospital. As previously stated, hospitals participating in a Medicare GME affiliation agreement may have different training needs such that a single percentage would not be advantageous to all new urban teaching hospitals. In addition, not all new urban teaching hospitals may have existing teaching

hospitals within the same corporate structure that are in a position to receive FTE cap slots as part of a Medicare GME affiliation agreement.

As noted earlier, one commenter made the suggestion of a time-limited period of 5 years after the establishment of a cap, or 10 years after first training residents. Based on the comments received, we believe that the potential misuse of Medicare GME affiliation agreements can be mitigated after a certain period of time. We agree that a 5-year waiting period after the establishment of an FTE cap is a suitable waiting period for purposes of allowing a new urban teaching hospital to participate in a Medicare GME affiliation agreement with an existing teaching hospital and receive a decrease to its FTE cap as a result of that affiliation agreement. We are comfortable with a 5-year waiting period because it is consistent with our already established policies regarding the use of FTE cap slots received under sections 5503 and 5506 of the Affordable Care Act. In the CY 2011 OPPS/ASC final rule with comment period (75 FR 72194), we stated that a hospital that received FTE cap slots under section 5503 may use those FTE cap slots for Medicare GME affiliation agreements after 5 years, which coincides with the end of the period of other restrictions applicable to the slots awarded under section 5503. In that same final rule with comment period, we stated that a hospital is able to use the slots it received under section 5506 for a Medicare GME affiliation agreement 5 years after the date the slots are made permanent at the respective hospital (75 FR 72221). That is, under both provisions of the Affordable Care Act, hospitals that received cap slots were/are encouraged to use their additional FTE cap slots to establish or expand existing residency training programs prior to using those cap slots as part of a Medicare GME

affiliation agreement. Accordingly, we are finalizing our proposed policy with modifications so that new urban teaching hospitals will have additional flexibilities under the Medicare GME affiliation agreement regulations after a 5-year waiting period, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019.

We are finalizing a policy that, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital (that is, a hospital that established permanent FTE caps after 1996) may enter into a Medicare GME affiliated group and receive a decrease to its FTE caps if the decrease results from a Medicare GME affiliated group consisting solely of two or more new urban teaching hospitals. In addition, we are finalizing a policy that, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital(s) may enter into a Medicare GME affiliated group with an existing teaching hospital(s) (that is, a hospital(s) with 1996 FTE caps) and receive a decrease to its FTE caps, as long as the new urban teaching's hospitals caps have been in effect for 5 or more years. That is, once a new urban teaching hospital's caps are effective, after a cap-building period, the new urban teaching hospital can participate in a Medicare GME affiliation agreement with an existing teaching hospital and receive a decrease to its FTE caps after an additional 5-year waiting period.

Because Medicare GME affiliation agreements are effective consistent with the residency training year (July 1 through June 30), under the policy finalized in this rule, the new urban teaching hospital will be able to participate in an affiliation agreement with an existing teaching hospital and receive a decrease to its FTE caps effective with the

July 1 date (the residency training year) that begins at least 5 years after the new urban teaching hospital's caps are effective. In the August 22, 2014 **Federal Register** (79 FR 50110), we finalized a policy that a new teaching hospital's FTE caps are effective beginning with the applicable hospital's cost reporting period that coincides with or follows the start of the sixth program year of the first new program started. Therefore, in applying both the policy finalized in the August 22, 2014 **Federal Register** and the 5-year waiting period for new urban teaching hospitals finalized in this rule, a new urban teaching hospital can lend FTE cap slots to an existing teaching hospital under a Medicare GME affiliation agreement, effective with the July 1 date (the residency training year) that is at least 5 years after the start of the hospital's cost reporting period that coincides with or follows the start of the sixth program year of the first new program. Consistent with this policy, we are amending the regulations at § 413.79(e)(1)(iv) as follows:

- Effective for Medicare GME affiliation agreements entered into on or after October 1, 2005, except as provided in § 413.79(e)(1)(iv)(B)(2), an urban hospital that qualifies for an adjustment to its FTE cap under § 413.79(e)(1) is permitted to be part of a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap only if the adjustment that results from the affiliation is an increase to the urban hospital's FTE cap.

- Effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, an urban hospital that received an adjustment to its FTE cap under § 413.79(e)(1) is permitted to be part of a Medicare GME affiliated group for purposes of

establishing an aggregate FTE cap and receive an adjustment that is a decrease to the urban hospital's FTE cap, provided the Medicare GME affiliated group meets one of the following conditions:

- The Medicare GME affiliated group consists solely of two or more urban hospitals that qualify for adjustments to their FTE caps under § 413.79(e)(1).
- The Medicare GME affiliated group includes an urban hospital(s) that received FTE cap(s) under § 413.79(c)(2)(i) and/or § 412.105(f)(1)(iv)(A). This Medicare GME affiliated group must be established effective with a July 1 date (the residency training year) that is at least 5 years after the start of the cost reporting period that coincides with or follows the start of the sixth program year of the first new program for which the hospital's FTE cap was adjusted in accordance with § 413.79(e)(1) or § 412.105(f)(1)(v)(C) or (D), or both.

We note that we have made a conforming change to § 413.79(e)(1)(iv)(A) to clarify that new teaching hospitals can continue to participate in Medicare GME affiliated groups with existing teaching hospitals wherein the new teaching hospitals receive increases to their FTE caps. In addition, we are clarifying that the terms “qualifies” and “qualify” used at § 413.79(e)(1)(iv)(A) and § 413.79(e)(1)(iv)(B)(1) are meant to include new teaching hospitals that have already established permanent FTE caps and new teaching hospitals that in the future will establish permanent FTE caps.

The 5-year waiting period and the policy described at § 413.79(e)(1)(iv)(B)(2) may best be explained through the examples below.

Example 1: Assume Hospital A's (a new urban teaching hospital that did not train residents in 1996) cost reporting period is from July 1 to June 30. Hospital A started training residents in its first new program effective July 1, 2014. Hospital A's 5-year cap-building period lasts through June 30, 2019 and its caps are effective July 1, 2019. Hospital A would be able to participate in a Medicare GME affiliation agreement with an existing teaching hospital and receive a decrease to its FTE caps beginning with the July 1 date (the residency training year) that is at least 5 years after July 1, 2019 (the start of the cost reporting period in which the permanent FTE caps are effective). Therefore, Hospital A would be able to receive a decrease to its FTE caps effective July 1, 2024.

Example 2: Assume Hospital B (a new urban teaching hospital that did not train residents in 1996) has a cost reporting period that is from January 1 to December 31. Hospital B also started training residents in its first new program effective July 1, 2014. Hospital B's 5-year cap building period lasts through June 30, 2019 and its cap is effective January 1, 2020. Hospital B would be able to participate in a Medicare GME affiliation agreement with an existing teaching hospital and receive a decrease to its FTE caps beginning with the July 1 date (the residency training year) that is at least 5 years after January 1, 2020 (the start of the cost reporting period in which the permanent FTE caps are effective). Therefore, Hospital B would be able to receive a decrease to its FTE caps effective July 1, 2025.

Example 3: Assume Hospital C (a new urban teaching hospital that did not train residents in 1996) has a cost reporting period that is from October 1 to September 30. Hospital C, like Hospitals A and B, started training residents in its first new program

effective July 1, 2014. Hospital C's 5-year cap building period lasts through June 30, 2019 and its caps are effective October 1, 2019. Hospital C would be able to participate in a Medicare GME affiliation agreement with an existing teaching hospital and receive a decrease to its FTE caps beginning with the July 1 date (the residency training year) that is at least 5 years after October 1, 2019 (the start of the cost reporting period in which the permanent FTE caps are effective). Therefore, Hospital C would be able to receive a decrease to its FTE caps effective July 1, 2025.

Because the policy finalized in this final rule is consistent with the start of the residency training year, that is, July 1, new urban teaching hospitals with fiscal years other than July 1 through June 30 may have to wait some additional time before being able to receive a decrease to their FTE resident caps through a Medicare GME affiliation agreement with an existing teaching hospital. However, the delay for these new urban teaching hospitals is a one-time delay, consistent with the timing of implementation of FTE caps, and we believe any negative aspect of this delay is far outweighed by the additional flexibility provided to these new urban teaching hospitals for purposes of Medicare GME affiliation agreements.

Unlike the examples provided above for Hospitals A, B, and C, the commenters mentioned "new" urban teaching hospitals that established their FTE caps after 1996, but have had those caps in place already for close to 20 years. These new urban teaching hospitals have already completed the 5-year waiting period and can receive a decrease to their FTE caps through Medicare GME affiliation agreements with existing teaching hospitals effective July 1, 2019. For example, assume Hospital D (a new urban teaching

hospital that was not training residents in 1996) established its caps effective July 1, 2000. Hospital D can receive a decrease to its FTE caps through a Medicare GME affiliation agreement with an existing teaching hospital effective July 1, 2019.

In summary, we are finalizing our proposed policy with modifications. Effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital may enter into a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap and receive an adjustment that is a decrease to the urban hospital's FTE caps if the decrease results from a Medicare GME affiliated group consisting solely of two or more new urban teaching hospitals. In addition, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital may participate in a Medicare GME affiliated group with an existing teaching hospital and receive an adjustment that is a decrease to the urban hospital's FTE caps, provided the Medicare GME affiliation agreement is effective with a July 1 date (the residency training year) that is at least 5 years after the start of the new urban teaching hospital's cost reporting period that coincides with or follows the start of the sixth program year of the first new program. Other requirements for Medicare GME affiliated groups and agreements at §§ 413.75(b) and 413.79(f) remain unchanged. The policies included in this final rule apply to both Medicare GME affiliation agreements and emergency Medicare GME affiliation agreements.

### 3. Out of Scope Public Comments Received

We received public comments regarding GME issues that were outside of the scope of the proposals included in the FY 2019 IPPS/LTCH PPS proposed rule. These comments requested that--

- CMS not establish FTE caps and PRAs for hospitals that have trained a de minimis number of FTE residents.
- CMS extend the cap-building window for teaching hospitals in rural, underserved, underresourced communities and/or areas currently lacking medical training infrastructure.
- CMS permit hospitals with new or established GME programs in areas of need to apply for additional residency slots through a “Cap Flexibility” demonstration project; prioritizing those supplying psychiatric residency training to regions with a maldistribution of physicians that provide mental health care and treatment.
- CMS use “Cap Flexibility” to allow new GME teaching hospitals in areas of need to have up to an additional 5 years beyond the current 5-year window to add residents to their training programs.
- Indian Health Service and Tribal Hospitals be made eligible to receive Medicare funding for residency training programs.
- CMS review the “frozen cap” for the Psychiatric Teaching Status Adjustment Cap for rural providers and CMS re-review the current care needs at the national level across inpatient psychiatric facilities and adjust regulations accordingly.
- CMS release its findings regarding awardee hospitals’ use of their section 5503 slots and their compliance with the terms and conditions of section 5503.

Because we consider these public comments to be outside of the scope of the proposed rule, we are not addressing them in this final rule.

#### 4. Notice of Closure of Teaching Hospital and Opportunity to Apply for Available Slots

##### a. Background

Section 5506 of the Patient Protection and Affordable Care Act (Pub. L. 111-148), as amended by the Health Care and Education Reconciliation Act of 2010 (Pub. L. 111-152) (collectively, the “Affordable Care Act”), authorizes the Secretary to redistribute residency slots after a hospital that trained residents in an approved medical residency program closes. Specifically, section 5506 of the Affordable Care Act amended the Act by adding subsection (vi) to section 1886(h)(4)(H) of the Act and modifying language at section 1886(d)(5)(B)(v) of the Act, to instruct the Secretary to establish a process to increase the FTE resident caps for other hospitals based upon the FTE resident caps in teaching hospitals that closed “on or after a date that is 2 years before the date of enactment” (that is, March 23, 2008). In the CY 2011 Outpatient Prospective Payment System (OPPS) final rule with comment period (75 FR 72212), we established regulations (42 CFR 413.79(o)) and an application process for qualifying hospitals to apply to CMS to receive direct GME and IME FTE resident cap slots from the hospital that closed. We made certain modifications to those regulations in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53434), and we made changes to the section 5506 application process in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50122 through 50134). The procedures we established apply both to teaching hospitals that

closed on or after March 23, 2008, and on or before August 3, 2010, and to teaching hospitals that close after August 3, 2010.

b. Notice of Closure of Memorial Hospital of Rhode Island, Located in Pawtucket, RI, and the Application Process--Round 13

CMS has learned of the closure of Memorial Hospital of Rhode Island, located in Pawtucket, RI (CCN 410001). Accordingly, this notice serves to notify the public of the closure of this teaching hospital and initiate another round of the section 5506 application and selection process. This round will be the 13<sup>th</sup> round (“Round 13”) of the application and selection process. The table below contains the identifying information and IME and direct GME FTE resident caps for the closed teaching hospital, which is part of the Round 13 application process under section 5506 of the Affordable Care Act.

CCN	Provider Name	City and State	CBSA Code	Terminating Date	IME FTE Resident Cap (including +/- MMA Sec. 422 <sup>1</sup> and ACA Sec. 5503 <sup>2</sup> Adjustments)	Direct GME FTE Resident Cap (including +/- MMA Sec. 422 <sup>1</sup> and ACA Sec. 5503 <sup>2</sup> Adjustments)
410001	Memorial Hospital of Rhode Island	Pawtucket, RI	39300	January 31, 2018	67.75 + 5.91 sec. 422 increase = <b>73.66</b> <sup>3</sup>	75.56 – 0.47 sec. 422 reduction – 2.47 sec. 5503 reduction = <b>72.62</b> <sup>4</sup>

<sup>1</sup> Section 422 of the MMA, Pub. L. 108-173, redistributed unused IME and direct GME residency slots effective July 1, 2005.

<sup>2</sup> Section 5503 of the Affordable Care Act of 2010, Pub. L. 111-148 and Pub. L. 111-152, redistributed unused IME and direct GME residency slots effective July 1, 2011.

<sup>3</sup> Memorial Hospital of Rhode Island’s 1996 IME FTE resident cap is 67.75. Under section 422 of the MMA, the hospital received an increase of 5.91 to its IME FTE resident cap: 67.75 + 5.91 = 73.66.

<sup>4</sup> Memorial Hospital of Rhode Island's 1996 direct GME FTE resident cap is 75.56. Under section 422 of the MMA, the hospital received a reduction of 0.47 to its direct GME FTE resident cap, and under section 5503 of the Affordable Care Act, the hospital received a reduction of 2.47 to its direct GME FTE resident cap:  $75.56 - 0.47 - 2.47 = 72.62$ .

c. Application Process for Available Resident Slots

The application period for hospitals to apply for slots under section 5506 of the Affordable Care Act is 90 days following notice to the public of a hospital closure (77 FR53436). Therefore, hospitals that wish to apply for and receive slots from the FTE resident caps of closed Memorial Hospital of Rhode Island, located in Pawtucket, RI, must submit applications (Section 5506 Application Form posted on Direct Graduate Medical Education (DGME) website as noted at the end of this section) directly to the CMS Central Office no later than October 31, 2018. The mailing address for the CMS Central Office is included on the application form. Applications must be received by the CMS Central Office by the October 31, 2018 deadline date. It is *not* sufficient for applications to be postmarked by this date.

After an applying hospital sends a hard copy of a section 5506 slot application to the CMS Central Office mailing address, the hospital is strongly encouraged to notify the CMS Central Office of the mailed application by sending an email to: [ACA5506application@cms.hhs.gov](mailto:ACA5506application@cms.hhs.gov). In the email, the hospital should state: "On behalf of [insert hospital name and Medicare CCN#], I, [insert your name], am sending this email to notify CMS that I have mailed to CMS a hard copy of a section 5506 application under Round 13 due to the closure of Memorial Hospital of Rhode Island. If you have any questions, please contact me at [insert phone number] or [insert your email address]."

An applying hospital should not attach an electronic copy of the application to the email. The email will only serve to notify the CMS Central Office to expect a hard copy application that is being mailed to the CMS Central Office.

We have not established a deadline by when CMS will issue the final determinations to hospitals that receive slots under section 5506 of the Affordable Care Act. However, we review all applications received by the deadline and notify applicants of our determinations as soon as possible.

We refer readers to the CMS Direct Graduate Medical Education (DGME) website at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/DGME.html> to download a copy of the section 5506 application form (Section 5506 Application Form) that hospitals must use to apply for slots under section 5506 of the Affordable Care Act. Hospitals should also access this same website for a list of additional section 5506 guidelines for the policy and procedures for applying for slots, and the redistribution of the slots under sections 1886(h)(4)(H)(vi) and 1886(d)(5)(B)(v) of the Act.

#### L. Rural Community Hospital Demonstration Program

##### 1. Introduction

The Rural Community Hospital Demonstration was originally authorized for a 5-year period by section 410A of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) (Pub. L. 108-173), and extended for another 5-year period by sections 3123 and 10313 of the Affordable Care Act (Pub. L. 111-148). Subsequently, section 15003 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), enacted

December 13, 2016, amended section 410A of Pub. L. 108-173 to require a 10-year extension period (in place of the 5-year extension required by the Affordable Care Act, as further discussed below). Section 15003 also requires that, no later than 120 days after enactment of Pub. L. 114-255, the Secretary must issue a solicitation for applications to select additional hospitals to participate in the demonstration program for the second 5 years of the 10-year extension period, so long as the maximum number of 30 hospitals stipulated by the Affordable Care Act is not exceeded. In this final rule, we are providing a summary of the previous legislative provisions and their implementation; a description of the provisions of section 15003 of Pub. L. 114-255; our final policies for implementation; the finalized budget neutrality methodology for the extension period authorized by section 15003 of Pub. L. 114-255, including a discussion of the budget neutrality methodology used in previous final rules for periods prior to the extension period; and an update on the reconciliation of actual and estimated costs of the demonstration for previous years (2011, 2012, and 2013).

## 2. Background

Section 410A(a) of Pub. L. 108-173 required the Secretary to establish a demonstration program to test the feasibility and advisability of establishing rural community hospitals to furnish covered inpatient hospital services to Medicare beneficiaries. The demonstration pays rural community hospitals under a reasonable cost-based methodology for Medicare payment purposes for covered inpatient hospital services furnished to Medicare beneficiaries. A rural community hospital, as defined in section 410A(f)(1), is a hospital that--

- Is located in a rural area (as defined in section 1886(d)(2)(D) of the Act) or is treated as being located in a rural area under section 1886(d)(8)(E) of the Act;
- Has fewer than 51 beds (excluding beds in a distinct part psychiatric or rehabilitation unit) as reported in its most recent cost report;
- Provides 24-hour emergency care services; and
- Is not designated or eligible for designation as a CAH under section 1820 of the Act.

Section 410A(a)(4) of Pub. L. 108-173 specified that the Secretary was to select for participation no more than 15 rural community hospitals in rural areas of States that the Secretary identified as having low population densities. Using 2002 data from the U.S. Census Bureau, we identified the 10 States with the lowest population density in which rural community hospitals were to be located in order to participate in the demonstration: Alaska, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, and Wyoming (Source: U.S. Census Bureau, Statistical Abstract of the United States: 2003).

CMS originally solicited applicants for the demonstration in May 2004; 13 hospitals began participation with cost reporting periods beginning on or after October 1, 2004. In 2005, 4 of these 13 hospitals withdrew from the demonstration program and converted to CAH status. This left 9 hospitals participating at that time. In 2008, we announced a solicitation for up to 6 additional hospitals to participate in the demonstration program. Four additional hospitals were selected to participate under this solicitation. These 4 additional hospitals began under the demonstration payment

methodology with the hospitals' first cost reporting period starting on or after July 1, 2008. At that time, 13 hospitals were participating in the demonstration.

Five hospitals withdrew from the demonstration program during CYs 2009 and 2010. In CY 2011, one hospital among this original set of participating hospitals withdrew. These actions left 7 of the hospitals that were selected to participate in either 2004 or 2008 participating in the demonstration program as of June 1, 2011.

Sections 3123 and 10313 of the Affordable Care Act (Pub. L. 111-148) amended section 410A of Pub. L. 108-173, changing the Rural Community Hospital Demonstration program in several ways. First, the Secretary was required to conduct the demonstration program for an additional 5-year period, to begin on the date immediately following the last day of the initial 5-year period. Further, the Affordable Care Act required the Secretary to provide for the continued participation of rural community hospitals in the demonstration program during the 5-year extension period, in the case of a rural community hospital participating in the demonstration program as of the last day of the initial 5-year period, unless the hospital made an election to discontinue participation.

In addition, the Affordable Care Act required, during the 5-year extension period, that the Secretary expand the number of States with low population densities determined by the Secretary to 20. Further, the Secretary was required to use the same criteria and data that the Secretary used to determine the States for purposes of the initial 5-year period. The Affordable Care Act also allowed not more than 30 rural community

hospitals in such States to participate in the demonstration program during the 5-year extension period.

We published a solicitation for applications for additional participants in the Rural Community Hospital Demonstration program in the **Federal Register** on August 30, 2010 (75 FR 52960). The 20 States with the lowest population density that were eligible for the demonstration program were: Alaska, Arizona, Arkansas, Colorado, Idaho, Iowa, Kansas, Maine, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, and Wyoming (Source: U.S. Census Bureau, Statistical Abstract of the United States: 2003). Sixteen new hospitals began participation in the demonstration with the first cost reporting period beginning on or after April 1, 2011.

In addition to the 7 hospitals that were selected in either 2004 or 2008, the new selection led to a total of 23 hospitals in the demonstration. During CY 2013, one additional hospital of the set selected in 2011 withdrew from the demonstration, which left 22 hospitals participating in the demonstration, effective July 1, 2013, all of which continued their participation through December 2014. Starting from that date and extending through the end of FY 2015, the 7 hospitals that were selected in either 2004 or 2008 ended their scheduled 5-year periods of performance authorized by the Affordable Care Act on a rolling basis. Likewise, the participation period for the 14 hospitals that entered the demonstration, following the mandate of the Affordable Care Act and that were still participating, ended their scheduled periods of performance on a rolling basis according to the end dates of the hospitals' cost report periods, respectively, from

April 30, 2016 through December 31, 2016. (One hospital among this group closed in October 2015.)

### 3. Provisions of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255) and Finalized Policies for Implementation

#### a. Statutory Provisions

As stated earlier, section 15003 of Pub. L. 114-255 further amended section 410A of Pub. L. 108-173 to require the Secretary to conduct the Rural Community Hospital Demonstration for a 10-year extension period (in place of the 5-year extension period required by the Affordable Care Act), beginning on the date immediately following the last day of the initial 5-year period under section 410A(a)(5) of Pub. L. 108-173. Thus, the Secretary is required to conduct the demonstration for an additional 5-year period. Specifically, section 15003 of Pub. L. 114-255 amended section 410A(g)(4) of Pub. L. 108-173 to require that, for hospitals participating in the demonstration as of the last day of the initial 5-year period, the Secretary shall provide for continued participation of such rural community hospitals in the demonstration during the 10-year extension period, unless the hospital makes an election, in such form and manner as the Secretary may specify, to discontinue participation. Furthermore, section 15003 of Pub. L. 114-255 added subsection (g)(5) to section 410A of Pub. L. 108-173 to require that, during the second 5 years of the 10-year extension period, the Secretary shall apply the provisions of section 410A(g)(4) of Pub. L. 108-173 to rural community hospitals that are not described in subsection (g)(4) but that were participating in the demonstration as of

December 30, 2014, in a similar manner as such provisions apply to hospitals described in subsection (g)(4).

In addition, section 15003 of Pub. L. 114-255 amended section 410A of Pub. L. 108-173 to add paragraph (g)(6)(A) which requires that the Secretary issue a solicitation for applications no later than 120 days after enactment of paragraph (g)(6), to select additional rural community hospitals located in any State to participate in the demonstration program for the second 5 years of the 10-year extension period, without exceeding the maximum number of hospitals (that is, 30) permitted under section 410A(g)(3) of Pub. L. 108-173 (as amended by the Affordable Care Act). Section 410A(g)(6)(B) of Pub. L. 108-173 provides that, in determining which hospitals submitting an application pursuant to this solicitation are to be selected for participation in the demonstration, the Secretary must give priority to rural community hospitals located in one of the 20 States with the lowest population densities, as determined using the 2015 Statistical Abstract of the United States. The Secretary may also consider closures of hospitals located in rural areas in the State in which an applicant hospital is located during the 5-year period immediately preceding the date of enactment of the 21<sup>st</sup> Century Cures Act (December 13, 2016), as well as the population density of the State in which the rural community hospital is located.

b. Solicitation for Additional Participants

As required under section 15003 of Pub. L. 114-255, we issued a solicitation for additional hospitals to participate in the demonstration. We released this solicitation on April 17, 2017. As described in the FY 2018 IPPS/LTCH PPS proposed rule, the

solicitation identified the 20 States with the lowest population density according to the population estimates from the Census Bureau for 2013, from the *ProQuest Statistical Abstract of the United States, 2015*. These 20 States are: Alaska, Arizona, Arkansas, Colorado, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Vermont, and Wyoming. Applications were due May 17, 2017. Applications were assessed in accordance with the information requested in the solicitation; that is, the problem description, plan for financial viability, goals for the demonstration, contributions to quality of care, and collaboration with other providers and organizations. In accordance with the authorizing statute, closure of hospitals within the State of the applicant hospital and population density were considered in assessing applications.

c. Terms of Participation for the Extension Period Authorized by Pub. L. 114-255

In the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 19994), we stated that our goal was to finalize the selection of participants for the extension period authorized by Pub. L. 114-255 by June 2017, in time to include in the FY 2018 IPPS/LTCH PPS final rule an estimate of the costs of the demonstration during FY 2018 and the resulting budget neutrality offset amount, for these newly participating hospitals, as well as for those hospitals among the previously participating hospitals that decided to participate in the extension period. (The specific method for ensuring budget neutrality under section 410A of Pub. L. 108-173 was described in the FY 2018 IPPS proposed rule, consistent with general policies adopted in previous years.) We indicated that upon announcing the selection of new participants, we would confirm the start dates for the periods of

performance for these newly selected hospitals and for previously participating hospitals. We stated, on the other hand, that if final selection were not to occur by June 2017, we would not be able to include an estimate of the costs of the demonstration or an estimate of the budget neutrality offset amount for FY 2018 for these additional hospitals in the FY 2018 IPPS/LTCH PPS final rule.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38280), we finalized our policy with regard to the effective date for the application of the reasonable cost-based payment methodology under the demonstration for those previously participating hospitals choosing to participate in the second 5-year extension period. According to our finalized policy, each previously participating hospital began the second 5 years of the 10-year extension period and the cost-based payment methodology under section 410A of Pub. L. 108-173 (as amended by section 15003 of Pub. L. 114-255) on the date immediately after the period of performance under the first 5-year extension period ended. However, by the time of the FY 2018 IPPS/LTCH PPS final rule, we had not been able to verify which among the previously participating hospitals would be continuing participation, and thus were not able to estimate the costs of the demonstration for that year's final rule. We stated in the final rule that we would instead include the estimated costs of the demonstration for all participating hospitals for FY 2018, along with those for FY 2019, in the budget neutrality offset amount for the FY 2019 proposed and final rules.

Seventeen of the 21 hospitals that completed their periods of participation under the extension period authorized by the Affordable Care Act elected to continue in the

second 5-year extension period for the full second 5-year extension period. Of the four hospitals that did not elect to continue participating, three hospitals converted to CAH status during the time period of the second 5-year extension period. Thus, the 5-year period of performance for each of these hospitals started on dates beginning May 1, 2015 and extending through January 1, 2017. On November 20, 2017, we announced that, as a result of the solicitation issued earlier in the year, 13 additional hospitals were selected to participate in the demonstration in addition to these 17 hospitals continuing participation from the first 5-year extension period. (Hereafter, these two groups are referred to as “newly participating” and “previously participating” hospitals, respectively.) We announced, as well, that each of these newly participating hospitals would begin its 5-year period of participation effective the start of the first cost reporting period on or after October 1, 2017.

We described these provisions in the FY 2019 IPPS/LTCH PPS proposed rule. Since the publication of the proposed rule, one of the hospitals selected in 2017 has withdrawn from the demonstration, prior to beginning participation in the demonstration on July 1, 2018. Thus, 29 hospitals are participating during FY 2018.

#### 4. Budget Neutrality

##### a. Statutory Budget Neutrality Requirement

Section 410A(c)(2) of Pub. L. 108-173 requires that, in conducting the demonstration program under this section, the Secretary shall ensure that the aggregate payments made by the Secretary do not exceed the amount which the Secretary would have paid if the demonstration program under this section was not implemented. This

requirement is commonly referred to as “budget neutrality.” Generally, when we implement a demonstration program on a budget neutral basis, the demonstration program is budget neutral on its own terms; in other words, the aggregate payments to the participating hospitals do not exceed the amount that would be paid to those same hospitals in the absence of the demonstration program. Typically, this form of budget neutrality is viable when, by changing payments or aligning incentives to improve overall efficiency, or both, a demonstration program may reduce the use of some services or eliminate the need for others, resulting in reduced expenditures for the demonstration program’s participants. These reduced expenditures offset increased payments elsewhere under the demonstration program, thus ensuring that the demonstration program as a whole is budget neutral or yields savings. However, the small scale of this demonstration program, in conjunction with the payment methodology, made it extremely unlikely that this demonstration program could be held to budget neutrality under the methodology normally used to calculate it--that is, cost-based payments to participating small rural hospitals were likely to increase Medicare outlays without producing any offsetting reduction in Medicare expenditures elsewhere. In addition, a rural community hospital’s participation in this demonstration program would be unlikely to yield benefits to the participants if budget neutrality were to be implemented by reducing other payments for these same hospitals. Therefore, in the 12 IPPS final rules spanning the period from FY 2005 through FY 2016, we adjusted the national inpatient PPS rates by an amount sufficient to account for the added costs of this demonstration program, thus applying budget neutrality across the payment system as a whole rather than merely across the

participants in the demonstration program. (A different methodology was applied for FY 2017.) As we discussed in the FYs 2005 through 2017 IPPS/LTCH PPS final rules (69 FR 49183; 70 FR 47462; 71 FR 48100; 72 FR 47392; 73 FR 48670; 74 FR 43922, 75 FR 50343, 76 FR 51698, 77 FR 53449, 78 FR 50740, 77 FR 50145; 80 FR 49585; and 81 FR 57034, respectively), we believe that the language of the statutory budget neutrality requirements permits the agency to implement the budget neutrality provision in this manner.

b. Methodology Used In Previous Final Rules for Periods Prior to the Extension Period Authorized by the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255)

We have generally incorporated two components into the budget neutrality offset amounts identified in the final IPPS rules in previous years. First, we have estimated the costs of the demonstration for the upcoming fiscal year, generally determined from historical, “as submitted” cost reports for the hospitals participating in that year. Update factors representing nationwide trends in cost and volume increases have been incorporated into these estimates, as specified in the methodology described in the final rule for each fiscal year. Second, as finalized cost reports became available, we have determined the amount by which the actual costs of the demonstration for an earlier, given year, differed from the estimated costs for the demonstration set forth in the final IPPS rule for the corresponding fiscal year, and we have incorporated that amount into the budget neutrality offset amount for the upcoming fiscal year. If the actual costs for the demonstration for the earlier fiscal year exceeded the estimated costs of the demonstration identified in the final rule for that year, this difference was added to the

estimated costs of the demonstration for the upcoming fiscal year when determining the budget neutrality adjustment for the upcoming fiscal year. Conversely, if the estimated costs of the demonstration set forth in the final rule for a prior fiscal year exceeded the actual costs of the demonstration for that year, this difference was subtracted from the estimated cost of the demonstration for the upcoming fiscal year when determining the budget neutrality adjustment for the upcoming fiscal year. (We note that we have calculated this difference for FYs 2005 through 2010 between the actual costs of the demonstration as determined from finalized cost reports once available, and estimated costs of the demonstration as identified in the applicable IPPS final rules for these years.)

c. Budget Neutrality Methodology for the Extension Period Authorized by the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255)

(1) General Approach

We finalized our budget neutrality methodology for periods of participation under the second 5 years of the 10-year extension period in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38285 through 38287). Similar to previous years, we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20444) that we would incorporate an estimate of the costs of the demonstration, generally determined from historical, “as submitted” cost reports for the participating hospitals and appropriate update factors, into a budget neutrality offset amount to be applied to the national IPPS rates for the upcoming fiscal year. In addition, we stated that we would continue to apply our general policy from previous years of including, as a second component to the budget neutrality offset amount, the amount by which the actual costs of the demonstration for an earlier, given

year (as determined from finalized cost reports when available) differed from the estimated costs for the demonstration set forth in the final IPPS rule for the corresponding fiscal year. As we described in the FY 2018 final rule and FY 2019 proposed rule, we are incorporating several distinct components into the budget neutrality offset amount for FY 2019:

- For each previously participating hospital that has decided to participate in the second 5 years of the 10-year extension period, the cost-based payment methodology under the demonstration began on the date immediately following the end date of its period of performance for the first 5-year extension period. In addition, for previously participating hospitals that converted to CAH status during the time period of the second 5-year extension period, the demonstration payment methodology has been applied to the date following the end date of its period of performance for the first extension period to the date of conversion. As we finalized in the FY 2018 IPPS/LTCH PPS final rule, we are applying a specific methodology for ensuring that the budget neutrality requirement under section 410A of Pub. L. 108-173 is met. To reflect the costs of the demonstration for the previously participating hospitals, for their cost reporting periods starting in FYs 2015, 2016, and 2017, we will use available finalized cost reports that detail the actual costs of the demonstration for each of these fiscal years. We will then incorporate these amounts in the budget neutrality offset amount to be included in a future IPPS final rule. We expect to do this in either FY 2020 or FY 2021, based on the availability of finalized reports.

- In addition, we will include a component to our overall methodology similar to previous years, according to which an estimate of the costs of the demonstration for both previously and newly participating hospitals for the upcoming fiscal year is incorporated into a budget neutrality offset amount to be applied to the national IPPS rates for the upcoming fiscal year. For FY 2019, in this final rule, we are including the estimated costs of the demonstration for FYs 2018 and 2019 in accordance with the methodology finalized in the FY 2018 IPPS/LTCH PPS final rule.

- Similar to previous years, in order to meet the budget neutrality requirement in section 410A(c)(2) of Pub. L. 108-173 with respect to the second 5-year extension period, we will continue to implement the policy according to when finalized cost reports become available for each of the second 5 years of the 10-year extension period for the newly participating hospitals and for cost reporting periods starting in or after FY 2018 that occur during the second 5-year extension period for the previously participating hospitals. We will determine the difference between the actual costs of the demonstration as determined from these finalized cost reports and the estimated cost indicated in the corresponding fiscal year IPPS final rule, and include that difference either as a positive or negative adjustment in the upcoming year's final rule.

As described earlier, we have calculated this difference for FYs 2005 through 2010 between the actual costs of the demonstration, as determined from finalized cost reports and estimated costs of the demonstration set forth in the applicable IPPS final rules for these years, and then incorporated that amount into the budget neutrality offset amount for an upcoming fiscal year. As we proposed in the FY 2019 IPPS/LTCH PPS

proposed rule (83 FR 20444), in this FY 2019 IPPS/LTCH PPS final rule, we are including this difference based on finalized cost reports for FYs 2011, 2012, and 2013 in the budget neutrality offset adjustment to be applied to the national IPPS rates for FY 2019. In future IPPS rules, we will continue this reconciliation, calculating the difference between actual and estimated costs for the remaining years of the first extension period (that is, FYs 2014 through 2016), and, as described above, the further years of the demonstration under the second extension period, applying this difference to the budget neutrality offset adjustments identified in future years' final rules.

(2) Methodology for the Budget Neutrality Adjustment for the Previously Participating Hospitals for FYs 2015 through 2017

As we finalized in the FY 2018 IPPS/LTCH PPS final rule (and again described in the FY 2019 IPPS/LTCH PPS proposed rule), for each previously participating hospital, the cost-based payment methodology under the demonstration will be applied to the date immediately following the end date of its period of performance for the first 5-year extension period. We are applying the same methodology as previously finalized to account for the costs of the demonstration and ensure that the budget neutrality requirement under section 410A of Pub. L. 108-173 is met for the previously participating hospitals for cost reporting periods starting in FYs 2015, 2016, and 2017. We believe it is appropriate to determine such a specific methodology applicable to these cost reporting periods because they are a component of the payment methodology for the demonstration under the second extension period, authorized by section 15003 of Pub. L. 114-255, yet encompass the provision of services and incurred costs occurring

prior to the start of FY 2018, when the terms of continuation for these hospitals under this second extension period were finalized.

To reflect the costs of the demonstration for the previously participating hospitals for their cost reporting periods under the second extension period starting before FY 2018 (that is, cost reporting periods starting in FYs 2015, 2016, and 2017), we will determine the actual costs of the demonstration for each of these fiscal years when finalized cost reports become available. Thus, for a hospital with an end date of June 30, 2015 for the first participation period, we will determine from finalized cost reports the specific amount contributing to the total costs of the demonstration for the 3 cost reporting years from July 1, 2015 through June 30, 2018; for a hospital with an end date of June 30, 2016, we will determine from finalized cost reports the amount contributing to costs of the demonstration for the 2 cost reporting periods from July 1, 2016 through June 30, 2018.

We note that, for these hospitals, this last cost report period may include services occurring since the enactment of Pub. L. 114-255 and also during FY 2018. However, we believe that applying a uniform method for determining costs across a cost report year would be more reasonable from the standpoint of operational feasibility and consistent application of cost determination principles. Under this approach, we will incorporate these amounts for the previously participating hospitals for cost reporting periods starting in FYs 2015, 2016, and 2017 into a single amount to be included in the calculation of the budget neutrality offset amount to the national IPPS rates in a future final rule after such

finalized cost reports become available. As noted above, we expect to do this in FY 2020 or FY 2021.

### (3) Methodology for Estimating Demonstration Costs for FY 2018

As discussed earlier and as we described in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20444), as a component of the overall budget neutrality methodology, we are using a methodology similar to previous years, according to which an estimate of the costs of the demonstration for the upcoming fiscal year is incorporated into a budget neutrality offset amount to be applied to the national IPPS rates for the upcoming fiscal year. As explained above, for FY 2019, we will be including the estimated costs of the demonstration for FYs 2018 and 2019.

As described in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38286) and FY 2019 IPPS/LTCH PPS proposed rule, we are incorporating a specific calculation to account for the fact that the cost reporting periods for the participating hospitals applicable to the estimate of the costs of the demonstration for FY 2018 would start at different points of time during FY 2018. That is, we are prorating estimated reasonable cost amounts and amounts that would be paid without the demonstration for FY 2018 according to the fraction of the number of months within the hospital's cost reporting period starting in FY 2018 that fall within the total number of months in the fiscal year. For example, if a hospital started its cost reporting period on January 1, 2018, we are multiplying the estimated cost and payment amounts, derived as described below, by a factor of 0.75. (In this discussion of how the overall calculations are conducted, this factor is referred to as "the hospital-specific prorating factor.") The methodology for

calculating the amount applicable to FY 2018 to be incorporated into the budget neutrality offset amount for FY 2019 was described in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38286) and proceeds according to the following steps:

Step 1: For each of the 29 participating hospitals, we identify the reasonable cost amount calculated under the reasonable cost methodology for covered inpatient hospital services, including swing beds, as indicated on the “as submitted” cost report for the most recent cost reporting period available. (For each of these hospitals, these “as submitted” cost reports are those with cost report period end dates in CY 2016.) We believe these most recent available cost reports to be an accurate predictor of the costs of the demonstration in FY 2018 because they give us a recent picture of the participating hospitals’ costs.

For each hospital, we multiply each of these amounts by the FY 2017 and 2018 IPPS market basket percentage increases, which are formulated by the CMS Office of the Actuary. The result for each participating hospital would be the general estimated reasonable cost amount for covered inpatient hospital services for FY 2018.

Consistent with our methods in previous years for formulating this estimate, we apply the IPPS market basket percentage increases for FYs 2017 through 2018 to the applicable estimated reasonable cost amounts (described above) in order to model the estimated FY 2018 reasonable cost amount under the demonstration. We believe that the IPPS market basket percentage increases appropriately indicate the trend of increase in inpatient hospital operating costs under the reasonable cost methodology for the years involved.

Step 2: For each of the participating hospitals, we identify the estimated amount that would otherwise be paid in FY 2018 under applicable Medicare payment methodologies for covered inpatient hospital services, including swing beds (as indicated on the same set of “as submitted” cost reports as in Step 1), if the demonstration were not implemented. We then multiply each of these hospital-specific amounts (for covered inpatient hospital services including swing-bed services), by the FYs 2017 and 2018 (in accordance with the discussion above) IPPS applicable percentage increases. This methodology differs from Step 1, in which we are applying the market basket percentage increases to the hospitals’ applicable estimated reasonable cost amount for covered inpatient hospital services. We believe that the IPPS applicable percentage increases are appropriate factors to update the estimated amounts that generally would otherwise be paid without the demonstration. This is because IPPS payments constitute the majority of payments that would otherwise be made without the demonstration and the applicable percentage increase is the factor used under the IPPS to update the inpatient hospital payment rates.

We note that, in the FY 2019 IPPS/LTCH PPS proposed rule, we had applied a 3-percent volume adjustment to the estimates resulting from each of Steps 1 and 2. This increase was consistent with previous policy, and intended to reflect the possibility that hospitals’ inpatient caseloads might increase. However, we stated in the proposed rule that we would evaluate the appropriateness of this increase in light of empirical trends specific to the participating hospitals. For each of the 17 previously participating hospitals, we compared the number of Medicare inpatient discharge reported on their cost

reports for cost reporting years ending in 2012 and in 2016, and found an overall decline between these years of approximately 14 percent. For the 12 newly selected hospitals, we examined statistics on inpatient discharges for 2014 and 2016 reported on their applications, and found an increase between these years of approximately 1.7 percent. Considering that the overall trend reflects declining Medicare inpatient discharges, we have determined that the additional 3-percent adjustment is no longer justified and, therefore, are omitting it from these estimated amounts in this final rule.

Step 3: We subtract the amounts derived in Step 2 from the amount derived in Step 1. According to our methodology, each of these resulting amounts indicates the difference for the hospital (for covered inpatient hospital services, including swing beds), which would be the general estimated amount of the costs of the demonstration for FY 2018.

Step 4: For each hospital, we multiply the amount derived in Step 3 by the hospital-specific prorating factor. The resulting amount represents for each hospital the cost of the demonstration applicable to the cost reporting period beginning in FY 2018, on the basis of which the specific component of the budget neutrality offset amount applicable to FY 2018 is derived.

Step 5: We then sum these hospital-specific amounts derived in Step 4 across all 29 hospitals participating in the demonstration in FY 2018. This resulting sum represents the estimated costs of the demonstration applicable to FY 2018 to be incorporated in the budget neutrality offset amount for rulemaking in FY 2019.

In the FY 2019 IPPS/LTCH PPS proposed rule, the resulting amount applicable to FY 2018 was \$33,254,247. We stated that this estimated amount was based on specific assumptions regarding the data sources used, and that if updated data became available prior to the FY 2019 IPPS/LTCH PPS final rule, we would use them as appropriate to estimate the costs for the demonstration program applicable to FY 2018 in accordance with our methodology for determining the budget neutrality estimate.

For this final rule, the estimated amount for the costs of the demonstration applicable to FY 2018 differs from that in the proposed rule because of the following factors, which we have identified: (1) removing the hospital that has withdrawn; and (2) omitting the 3-percent volume adjustment. Based on these updated data, for this final rule, the resulting amount applicable to FY 2018 is \$31,070,880, which we have included in the budget neutrality offset adjustment for FY 2019.

(4) Methodology for Estimating Demonstration Costs for FY 2019

As described in the FY 2019 IPPS/LTCH PPS proposed rule, we are applying two differences specific to the methodology described for FY 2018 to estimate the costs of the demonstration for FY 2019. We are using the same set of “as submitted” cost reports in determining preliminary cost and payment amounts for covered inpatient hospital services. However, in updating these amounts to reflect increases in cost and payment, our methodology for determining the component of the budget neutrality offset amount applicable to FY 2019 entails applying the market basket percentage increase and applicable percentage increase for FY 2019, in addition to these update factors for FYs 2017 and 2018. The finalized amounts for FY 2019 for these respective update

factors are found in section IV.B. of the preamble to this final rule. Also, because we are expecting all of the participating hospitals to participate for the entire 12-month period encompassing FY 2019, there will be no application of any prorating factor in determining the estimated costs of the demonstration for FY 2019. (In addition, for the reasons described earlier, we are omitting the 3-percent volume adjustment in determining this estimate.)

For the FY 2019 IPPS/LTCH PPS proposed rule, the resulting amount for FY 2019 was \$78,409,842. Similar to above, we stated that if updated data became available prior to the final rule, we would use them to the extent appropriate to estimate the costs for the demonstration program in FY 2019 in accordance with our finalized methodology. Thus, the estimated amount of the costs of the demonstration for FY 2019 included in this FY 2019 IPPS/LTCH PPS final rule differs from that in the proposed rule because of several factors: (1) we are using the finalized market basket percentage and applicable percentage increase for FY 2019; (2) we are omitting cost report data on the one hospital that withdrew from the demonstration program; and (3) similar to our earlier discussion, we are omitting the 3-percent volume adjustment for FY 2019. Based on updated data, for this FY 2019 final rule, the resulting amount for FY 2019 is \$70,929,313, which we are including in the budget neutrality offset adjustment for FY 2019.

#### (5) Reconciling Actual and Estimated Costs for the Years of the Extension Period

Similar to previous years, as finalized in the FY 2018 IPPS/LTCH PPS final rule, we plan to operationalize the second specific component to the budget neutrality

requirement. That is, when finalized cost reports become available for each of the second 5 years of the 10-year extension period for the newly participating hospitals and for cost reporting periods starting in or after FY 2018 that occur during the second 5-year extension period for the previously participating hospitals, we will calculate the difference between the actual costs of the demonstration as determined from these finalized cost reports and the estimated cost indicated in the corresponding fiscal year IPPS final rule, and include that difference either as a positive or negative adjustment in the upcoming year's final rule.

Therefore, in keeping with the methodologies used in previous final rules, we will continue to use a methodology for calculating the budget neutrality offset amount for the second 5 years of the 10-year extension period consisting of two components: (1) the estimated demonstration costs in the upcoming fiscal year (as described earlier); and (2) the amount by which the actual demonstration costs corresponding to an earlier, given year (which would be known once finalized cost reports become available for that year) differed from the budget neutrality offset amount finalized in the corresponding year's IPPS final rule.

d. Reconciling Actual and Estimated Costs of the Demonstration for Previous Years (2011, 2012, and 2013)

As described earlier, we have calculated the difference for FYs 2005 through 2010 between the actual costs of the demonstration, as determined from finalized cost reports once available, and estimated costs of the demonstration as identified in the applicable IPPS final rules for these years. In the FY 2017 IPPS/LTCH PPS final rule

(81 FR 57037), we finalized a proposal to reconcile the budget neutrality offset amounts identified in the IPPS final rules for FYs 2011 through 2016 with the actual costs of the demonstration for those years, considering the fact that the demonstration was scheduled to end December 31, 2016. In that final rule, we stated that we believed it would be appropriate to conduct this analysis for FYs 2011 through 2016 at one time, when all of the finalized cost reports for cost reporting periods beginning in FYs 2011 through 2016 are available. We stated that such an aggregate analysis encompassing the cost experience through the end of the period of performance of the demonstration would represent an administratively streamlined method, allowing for the determination of any appropriate adjustment to the IPPS rates and obviating the need for multiple, fiscal year-specific calculations and regulatory actions. Given the general lag of 3 years in finalizing cost reports, we stated that we expected any such analysis would be conducted in FY 2020.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38287), with the extension of the demonstration for another 5-year period, as authorized by section 15003 of Pub. L. 114-255, we modified the plan outlined in the FY 2017 IPPS/LTCH PPS final rule, and instead returned to the general procedure in previous final rules; that is, as finalized cost reports become available, we would determine the amount by which the actual costs of the demonstration for an earlier, given year differ from the estimated costs for the demonstration set forth in the IPPS final rule for the corresponding fiscal year, and then incorporate that amount into the budget neutrality offset amount for an upcoming fiscal year. We finalized a policy that if the actual costs of the demonstration for the

earlier fiscal year exceeded the estimated costs of the demonstration identified in the final rule for that year, this difference would be added to the estimated costs of the demonstration for the upcoming fiscal year when determining the budget neutrality adjustment for the final rule. Likewise, we finalized a policy that if the estimated costs of the demonstration set forth in the final rule for a prior fiscal year exceeded the actual costs of the demonstration for that year, this difference would be subtracted from the estimated cost of the demonstration for the upcoming fiscal year when determining the budget neutrality adjustment for an upcoming fiscal year. However, given that this adjustment for specific years could be positive or negative, we would combine this reconciliation for multiple prior years into one adjustment to be applied to the budget neutrality offset amount for a single fiscal year, thus reducing the possibility of both positive and negative adjustments to be applied in consecutive years, and enhancing administrative feasibility. Specifically, when finalized cost reports for FYs 2011, 2012, and 2013 are available, we stated that we would include this difference for these years in the budget neutrality offset adjustment to be applied to the national IPPS rates in a future final rule. We stated that we expected that this would occur in FY 2019. We also stated that when finalized cost reports for FYs 2014 through 2016 are available, we would include the difference between the actual costs as reflected on these cost reports and the amounts included in the budget neutrality offset amounts for these fiscal years in a future final rule. We stated that we plan to provide an update in a future final rule regarding the year that we would expect that this analysis would occur.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, we identified the differences between the total cost of the demonstration as indicated on finalized FY 2011 and 2012 cost reports and the estimates for the costs of the demonstration for the corresponding year in each of these years' final rules, and we proposed to adjust the current year's budget neutrality offset amount by the combined difference. We stated that if any information relevant to the determination of these amounts (for example, a cost report reopening) would necessitate a revision of these amounts, we would make the appropriate change and include the determination in the FY 2019 IPPS/LTCH PPS final rule. We stated, furthermore, that if the needed costs reports are available in time for the FY 2019 IPPS/LTCH PPS final rule, we also would identify the difference between the total cost of the demonstration based on finalized FY 2013 cost reports and the estimates for the costs of the demonstration for that year, and incorporate that amount into the budget neutrality offset amount for FY 2019.

As described in the FY 2019 IPPS/LTCH PPS proposed rule, finalized cost reports are available for the 16 hospitals that completed a cost reporting period beginning in FY 2011 according to the demonstration cost-based payment methodology. We note that the estimate of the costs of the demonstration for FY 2011 that was incorporated into the budget neutrality offset amount was formulated prior to the selection of hospitals under the expansion of the demonstration authorized by the Affordable Care Act. Accordingly, we based the estimate of the costs of the demonstration for FY 2011 on projected costs for 30 hospitals, the maximum number allowed by the authorizing statute in the Affordable Care Act. The actual costs of the demonstration for FY 2011 (that is,

the amount from finalized cost reports for the 16 hospitals that were paid under the demonstration payment methodology for cost reporting periods with start dates during FY 2011), fell short of the estimated amount that was finalized in the FY 2011 IPPS/LTCH PPS final rule for FY 2011 by \$29,971,829. We have identified no factors that require a change to this number for this FY 2019 final rule.

In addition, as also described in the FY 2019 IPPS/LTCH PPS proposed rule, finalized cost reports for the 23 demonstration hospitals that began a cost reporting period in FY 2012 are also now available. The actual costs of the demonstration as determined from these finalized cost reports fell short of the estimated amount that was finalized in the FY 2012 IPPS final rule by \$8,500,373. Similarly, we have identified no factors that require a change to this number for this year's final rule.

For this final rule, finalized cost reports for the 22 hospitals that completed a cost reporting period under the demonstration payment methodology beginning in FY 2013 are available. The actual costs of the demonstration as determined from these finalized cost reports fell short of the estimated amount that was finalized in the FY 2013 IPPS final rule by \$5,398,382.

We note that the amounts identified for the actual cost of the demonstration for each of FYs 2011, 2012, and 2013 (determined from finalized cost reports) is less than the amount that was identified in the final rule for the respective year. Therefore, in keeping with previous policy finalized in situations when the costs of the demonstration fell short of the amount estimated in the corresponding year's final rule, we are including

this component as a negative adjustment to the budget neutrality offset amount for the current fiscal year.

e. Total Final Budget Neutrality Offset Amount for FY 2019

For this FY 2019 IPPS/LTCH PPS final rule, we are incorporating the following components into the calculation of the total budget neutrality offset for FY 2019:

Step 1: The amount determined under section IV.L.4.c.(3) of the preamble of this final rule, representing the difference applicable to FY 2018 between the sum of the estimated reasonable cost amounts that would be paid under the demonstration to participating hospitals for covered inpatient hospital services and the sum of the estimated amounts that would generally be paid if the demonstration had not been implemented. The determination of this amount includes prorating to reflect for each participating hospital the fraction of the number of months for the cost report year starting in FY 2018 falling into the overall 12 months of the fiscal year. This estimated amount is \$31,070,880.

Step 2: The amount, determined under section IV.L.4.c.(4) of the preamble of this final rule representing the corresponding difference of these estimated amounts for FY 2019. No prorating is applied in the determination of this amount. This estimated amount is \$70,929,313.

Step 3: The amount determined under section IV.L.4.d. of the preamble of this final rule according to which the actual costs of the demonstration for FY 2011 for the 16 hospitals that completed a cost reporting period beginning in FY 2011 differ from the estimated amount that was incorporated into the budget neutrality offset amount for

FY 2011 in the FY 2011 IPPS/LTCH PPS final rule. Analysis of this set of cost reports shows that the actual costs of the demonstration fell short of the estimated amount finalized in the FY 2011 IPPS/LTCH PPS final rule by \$29,971,829.

Step 4: The amount determined under section IV.L.4.d. of the preamble of this final rule, according to which the actual costs for the demonstration for FY 2012 for the 23 hospitals that completed a cost reporting period beginning in FY 2012 differ from the estimated amount in the FY 2012 final rule. Analysis of this set of cost reports shows that the actual costs of the demonstration for FY 2012 fell short of the estimated amount finalized in the FY 2012 IPPS/LTCH PPS final rule by \$8,500,373.

Step 5: The amount, also determined under section IV.L.4.d. of the preamble of this final rule, according to which the actual costs of the demonstration for FY 2013 for the 22 hospitals that completed a cost reporting period beginning in FY 2013 differ from the estimated amount in the FY 2013 final rule. Analysis of this set of cost reports shows that the actual costs of the demonstration for FY 2013 fell short of the estimated amount finalized in the FY 2013 IPPS/LTCH PPS final rule by \$5,398,382.

In keeping with previously finalized policy, we are applying these differences, according to which the actual costs of the demonstration for each of FYs 2011, 2012, and 2013 fell short of the estimated amount determined in the final rule for each of these fiscal years, by reducing the budget neutrality offset amount to the national IPPS rates for FY 2019 by these amounts.

Thus, the total budget neutrality offset amount that we are applying to the national IPPS rates for FY 2019 is: The amount determined under Step 1 (\$31,070,880) plus the

amount determined under Step 2 (\$70,929,313) minus the amount determined under Step 3 (\$29,971,829) minus the amount determined under Step 4 (\$8,500,373) minus the amount determined under Step 5 (\$5,398,382). This total is \$58,129,609.

In addition, in accordance with the policy finalized in the FY 2018 IPPS/LTCH PPS final rule, we will incorporate the actual costs of the demonstration for the previously participating hospitals for cost reporting periods starting in FYs 2015, 2016, and 2017 into a single amount to be included in the calculation of the budget neutrality offset amount to the national IPPS rates in a future final rule after such finalized cost reports become available. We expect to do this in FY 2020 or FY 2021.

In response to the FY 2019 IPPS/LTCH PPS proposed rule, we received one public comment in support of continuing the demonstration. We appreciate the commenter's support.

#### M. Revision of Hospital Inpatient Admission Orders Documentation Requirements under Medicare Part A

##### 1. Background

In the CY 2013 OPSS/ASC final rule with comment period (77 FR 68426 through 68433), we solicited public comments for potential policy changes to improve clarity and consensus among providers, Medicare, and other stakeholders regarding the relationship between hospital admission decisions and appropriate Medicare payment, such as when a Medicare beneficiary is appropriately admitted to the hospital as an inpatient and the cost to hospitals associated with making this decision. In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50938 through 50942), we adopted a set of policies widely referred to as the

“2 midnight” payment policy. Among the finalized changes, we codified through regulations at 42 CFR 412.3 the longstanding policy that a beneficiary becomes a hospital inpatient if formally admitted pursuant to the order of a physician (or other qualified practitioner as provided in the regulations) in accordance with the hospital conditions of participation (CoPs). In addition, we required that a written inpatient admission order be present in the medical record as a specific condition of Medicare Part A payment. In response to public comments that the requirement of a written admission order as a condition of payment is duplicative and burdensome on hospitals, we responded that the physician order reflects affirmation by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, and the “order serves the unique purpose of initiating the inpatient admission and documenting the physician’s (or other qualified practitioner as provided in the regulations) intent to admit the patient, which impacts its required timing.” Therefore, we finalized the policy requiring a written inpatient order for all hospital admissions as a specific condition of payment. We acknowledged that in the extremely rare circumstance the order to admit is missing or defective, yet the intent, decision, and recommendation of the ordering physician or other qualified practitioner to admit the beneficiary as an inpatient can clearly be derived from the medical record, medical review contractors are provided with discretion to determine that this information constructively satisfies the requirement that a written hospital inpatient admission order be present in the medical record.

## 2. Revisions Regarding Admission Order Documentation Requirements

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20447 and 20448), despite the discretion granted to medical reviewers to determine that admission order information derived from the medical record constructively satisfies the requirement that a written hospital inpatient admission order is present in the medical record, as we have gained experience with the policy, it has come to our attention that some medically necessary inpatient admissions are being denied payment due to technical discrepancies with the documentation of inpatient admission orders. Common technical discrepancies consist of missing practitioner admission signatures, missing co-signatures or authentication signatures, and signatures occurring after discharge. We have become aware that, particularly during the case review process, these discrepancies have occasionally been the primary reason for denying Medicare payment of an individual claim. In looking to reduce unnecessary administrative burden on physicians and providers and having gained experience with the policy since it was implemented, we have concluded that if the hospital is operating in accordance with the hospital CoPs, medical reviews should primarily focus on whether the inpatient admission was medically reasonable and necessary rather than occasional inadvertent signature documentation issues unrelated to the medical necessity of the inpatient stay. It was not our intent when we finalized the admission order documentation requirements that they should by themselves lead to the denial of payment for medically reasonable and necessary inpatient stays, even if such denials occur infrequently.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20447 and 20448), we proposed to revise the admission order documentation requirements by

removing the requirement that written inpatient admission orders are a specific requirement for Medicare Part A payment. Specifically, we proposed to revise the inpatient admission order policy to no longer require a written inpatient admission order to be present in the medical record as a specific condition of Medicare Part A payment. Hospitals and physicians are still required to document relevant orders in the medical record to substantiate medical necessity requirements. If other available documentation, such as the physician certification statement when required, progress notes, or the medical record as a whole, supports that all the coverage criteria (including medical necessity) are met, and the hospital is operating in accordance with the hospital conditions of participation (CoPs), we stated that we believe it is no longer necessary to also require specific documentation requirements of inpatient admission orders as a condition of Medicare Part A payment. We stated that the proposal would not change the requirement that an individual is considered an inpatient if formally admitted as an inpatient under an order for inpatient admission. While this continues to be a requirement, as indicated earlier, technical discrepancies with the documentation of inpatient admission orders have led to the denial of otherwise medically necessary inpatient admission. To reduce this unnecessary administrative burden on physicians and providers, we proposed to no longer require that the specific documentation requirements of inpatient admission orders be present in the medical record as a condition of Medicare Part A payment.

Accordingly, we proposed to revise the regulations at 42 CFR 412.3(a) to remove the language stating that a physician order must be present in the medical record and be

supported by the physician admission and progress notes, in order for the hospital to be paid for hospital inpatient services under Medicare Part A. We note that we did not propose any changes with respect to the “2 midnight” payment policy.

Comment: Numerous commenters supported CMS’ proposal. One commenter conveyed that there are instances where medical records clearly indicate inpatient intent but the associated claim is denied only because the inpatient admission order was missing a signature. Another commenter agreed with CMS’ proposal because the requirement for an inpatient admission order to be present in the medical record is duplicative in nature. One commenter explained that alleviating this requirement will result in significant burden reduction for physicians and providers.

Response: We appreciate the commenters’ support.

Comment: Some commenters were concerned that the proposal may render the inpatient admission order completely insignificant and not required for any purpose. In addition, and in further context, the commenters referenced previous CMS subregulatory guidance from January 2014 which explained that if a practitioner disagreed with the decision to admit a patient to inpatient status, the practitioner could simply refrain from authenticating the inpatient admission order and the patient would remain in outpatient status. The commenters were concerned that if CMS no longer requires a written inpatient admission order to be present in the medical record as a specific condition of Medicare Part A payment, CMS would not be able to distinguish between orders that were simply defective and orders that were intentionally not signed.

Other commenters believed that the proposal would make the payment process even more difficult, especially in instances where patients were not registered by the hospital admissions staff, did not receive the required notice of their inpatient status, and there was no valid admission order related to their visit. The commenters were concerned that these particular cases would prevent patients from being knowledgeable of their appeal rights and financial liability.

Some commenters believed that, without an inpatient admission order, Medicare coverage of SNF services would be at risk due to issues such as lack of clarity in the medical record or a MAC's misinterpretation of physician intent, and stated that denial of such needed services would negatively impact patients' health.

Response: Our proposal does not change the requirement that, for purposes of Part A payment, an individual becomes an inpatient when formally admitted as an inpatient under an order for inpatient admission. The physician order remains a significant requirement because it reflects a determination by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, and initiates the process for inpatient admission.

Regarding the concerns of some commenters regarding orders that were intentionally not signed because the practitioner responsible for signing disagreed with the decision to admit, it should never have been the case that the only evidence in the medical record regarding this uncommon situation was the absence of the physician's or other qualified practitioner's signature. The medical record as a whole should reflect whether there was a decision by a physician or other qualified practitioner to admit the

beneficiary as an inpatient or not. This fact is precisely why, under our current guidance, we acknowledged that in the extremely rare circumstance where the order to admit is missing or defective, yet the intent, decision, and recommendation of the ordering physician or other qualified practitioner to admit the beneficiary as an inpatient can clearly be derived from the medical record, medical review contractors have discretion to determine that this information constructively satisfies the requirement that a written hospital inpatient admission order be present in the medical record. We disagree with these commenters that reliance only on the absence of the signature in these uncommon situations reflected good medical documentation practice.

Regarding the commenters who were concerned that our proposal would remove the requirement for an order altogether, affecting patient appeal rights, or increase financial liability, as stated earlier, the physician order remains a requirement for purposes of reflecting a determination by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, initiating the inpatient admission. Additionally, regardless of this proposal and other physician order requirements described earlier, the hospital CoPs include the requirement that all Medicare inpatients must receive written information about their hospital discharge appeal rights.

Comment: Commenters inquired about situations where a patient in outpatient status under observation spent two medically necessary midnights and was subsequently discharged. The commenters stated that, in these situations, providers are allowed to obtain an admission order at any time prior to formal discharge. The commenters

inquired whether providers can review this stay after discharge, determine the 2-midnight benchmark was met, and submit a claim for inpatient admission.

Response: Again, the proposal would not change the requirement that, for purposes of Part A payment, an individual becomes an inpatient when formally admitted as an inpatient under an order for inpatient admission. As noted previously, the physician order reflects the determination by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, and initiates the inpatient admission. With respect to the question about reviewing an outpatient stay after discharge and submitting an inpatient claim for that stay, we refer readers to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50942) in our response to comments where we stated that “The physician order cannot be effective retroactively. Inpatient status only applies prospectively, starting from the time the patient is formally admitted pursuant to a physician order for inpatient admission, in accordance with our current policy.”

Comment: Some commenters asked whether condition code 44 was still required to change a patient’s status from inpatient to outpatient. Other commenters asked whether condition code 44 could still be used by hospitals without the presence of an inpatient admission order.

Response: We consider these comments regarding the use of condition code 44 to be outside the scope of the proposed rule because we did not make a proposal regarding changing patient status from inpatient to outpatient. Therefore, we are not responding to these comments in this final rule.

Comment: Some commenters wanted to know how the proposed policy changes the process for moving a patient from observation status to inpatient status and the timing of inpatient billing related to this process. Some commenters stated that the proposed policy change appears to suggest that the completion of admission orders would now be optional and other available documentation could be used to create retroactive orders.

Response: As stated earlier, the proposal does not change the requirement that, for purposes of Part A payment, an individual becomes an inpatient when formally admitted as an inpatient under an order for inpatient admission. In addition, this proposal does not change the fact that hospitals are required to operate in accordance with appropriate CoPs.

Regarding the comment about retroactive orders, it has been and continues to be longstanding Medicare policy to not permit retroactive orders. The order must be furnished at or before the time of the inpatient admission. The order can be written in advance of the formal admission (for example, for a prescheduled surgery), but the inpatient admission does not occur until hospital services are provided to the beneficiary.

Comment: Commenters also discussed how the proposed policy may affect procedures on the inpatient only list. Specifically, the commenters wanted to know how this policy proposal applies to patients who receive procedures on the inpatient only list when the patient is an outpatient. In instances when a patient's status changes to inpatient prior to an inpatient order being placed, the commenters questioned whether hospitals would be able to determine the inpatient only procedure was performed and submit a bill for Medicare Part A payment.

Response: The proposed revision does not include revisions to the policy for processing payment for inpatient only list procedures. As noted previously, our proposal does not change the requirement that, for purposes of Part A payment, an individual becomes an inpatient when formally admitted as an inpatient under an order for inpatient admission. The physician order remains a significant requirement because it reflects a determination by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, and initiates the process for inpatient admission. We did not understand the comment regarding a patient's status changing prior to an order being placed. Therefore, we are unable to specifically respond to that comment.

Comment: Commenters inquired if the proposal would change the requirements regarding which practitioners are allowed to furnish inpatient admission orders.

Response: The proposed revision relating to hospital inpatient admission order documentation requirements under Medicare Part A does not include revisions to the requirements regarding which practitioners are allowed furnish inpatient admission orders.

Comment: A number of commenters had specific questions regarding technical discrepancies. Specifically, the commenters wanted to know if CMS will be publishing a list of acceptable and unacceptable technical discrepancies considered by medical review contractors for the purposes of approving or denying Medicare Part A payment for inpatient admissions. In addition, the commenters wanted to know if CMS will require a specific error rate for compliance with inpatient physician orders, such as for provider

technical errors that may be deemed excessive or unacceptable. The commenters also inquired whether providers will be required to document in the medical record whether technical discrepancies occurred in order for Medicare Part A payment to be considered. For example, the commenters wanted to know if an inpatient order for a medically necessary inpatient admission is not signed prior to the patient's discharge, will the facility need to document why the technical discrepancy occurred.

Response: We have not considered developing a list of acceptable or unacceptable technical discrepancies nor have we considered requiring a technical discrepancy error rate.

In regards to the comment regarding whether this proposed policy would require documentation of how a technical discrepancy occurred, we refer readers to the following subregulatory guidance from the Medicare Benefits Policy Manual (MBPM), Chapter 1, Section 10.2.: "The order to admit may be missing or defective (that is, illegible, or incomplete, for example 'inpatient' is not specified), yet the intent, decision, and recommendation of the ordering practitioner to admit the beneficiary as an inpatient can clearly be derived from the medical record. In these situations, contractors have been provided with discretion to determine that this information provides acceptable evidence to support the hospital inpatient admission. However, there can be no uncertainty regarding the intent, decision, and recommendation by the ordering practitioner to admit the beneficiary as an inpatient, and no reasonable possibility that the care could have been adequately provided in an outpatient setting." This guidance will remain in effect after this rule is finalized.

Comment: Some commenters recommended that CMS change the audit requirements for contractors so that claims are not denied solely on technical issues found in the inpatient admission order. The commenters also suggested that CMS amend its Medicare Manual to clarify if an inpatient admission order is deemed defective.

Response: We thank the commenters for their recommendations and suggestions. In carrying out their work, medical review contractors are required to follow CMS regulations and policy guidance. If necessary, we may revise our manuals and/or issue additional subregulatory guidance as appropriate with respect to the finalized regulation.

Comment: Some commenters submitted information to demonstrate that CMS had indeed at one point intended to require orders and deny payment based on the absence of orders. As such, the commenters indicated that CMS' FY 2019 proposed policy would institute a change in language that may confuse hospitals due to lack of clarity. The commenters stated that any change should be accompanied with further changes to relevant CoPs and codified through provider education mechanisms.

The commenters stated that because of perceived uncertainty and lack of clarity in comparing previous CMS guidance and rulemaking language to the language in the policy proposal, providers are going to need assistance in how to proceed in determining how to document inpatient admission orders and ensure proper processing of Medicare Part A payment. The commenters requested that the proposed policy be incorporated into hospital's post-discharge review in addition to the audits performed by Medicare contractors.

In addition, commenters believed that the 2-midnight rule amended the Medicare CoPs to require an inpatient admission order. The commenters explained that if CMS proceeds with its proposal, the Agency would have to revise the CoPs to clarify that an order is no longer a condition for Medicare Part A payment.

Response: In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50938 through 50942), we adopted a set of policies widely referred to as the “2-midnight” payment policy, as well as codified the requirement that a physician order for inpatient admission was a specific condition for Part A payment. In that rulemaking, we acknowledged that, in the extremely rare circumstance that the order to admit is missing or defective, yet the intent, decision, and recommendation of the ordering physician or other qualified practitioner to admit the beneficiary as an inpatient can clearly be derived from the medical record, medical review contractors are provided with discretion to determine that this information constructively satisfies the requirement that a written hospital inpatient admission order be present in the medical record.

However, as we have gained experience with the policy, it has come to our attention that, despite the discretion granted to medical reviewers to determine that admission order information derived from the medical record constructively satisfies the requirement that a written hospital inpatient admission order is present in the medical record, some medically necessary inpatient admissions are being denied payment due to technical discrepancies with the documentation of inpatient admission orders. Particularly during the case review process, these discrepancies have occasionally been the primary reason for denying Medicare payment of an individual claim. We note that

when we finalized the admission order documentation requirements in past rulemaking and guidance, it was not our intent that admission order documentation requirements should, by themselves, lead to the denial of payment for medically reasonable and necessary inpatient stay, even if such denials occur infrequently. It is our intention that this revised policy will properly adjust the focus of the medical review process towards determining whether an inpatient stay was medically reasonable and necessary and intended by the admitting physician rather than towards occasional inadvertent signature or documentation issues unrelated to the medical necessity of the inpatient stay or the intent of the physician.

Regarding whether CMS would also need to make revisions to the CoPs in order to support this finalized revised regulation, we note that CMS did not make any amendments to the CoPs when we adopted the 2-midnight payment policy or our current inpatient admission order policy; therefore, there is no need to revise the CoPs as a result of the regulatory change we are now finalizing.

Comment: Commenters also asked if the proposal includes any changes to physician certification policy or regulations and whether physician certification will still be required to support payment for an inpatient Medicare Part A claim. Commenters believed CMS' preamble language that "(i)f other available documentation, such as the physician certification statement when required, progress notes, **or** the medical record as a whole..." implied that physician certification statements were not always required.

Response: The proposed revision of hospital inpatient admission orders documentation requirements under Medicare Part A did not include any changes to

physician certification requirements. Not all types of covered services provided to Medicare beneficiaries require physician certification. Physician certification of inpatient services is required for cases that are 20 inpatient days or more (long-stay cases), for outlier cases of hospitals other than inpatient psychiatric facilities, and for cases of CAHs. We refer readers also to the CY 2015 OPPTS/ASC final rule with comment period (79 FR 66997), and 42 CFR part 412, subpart F, 42 CFR 424.13, and 42 CFR 424.15.

Comment: Commenters wanted to know if the proposed revision of hospital inpatient admission orders documentation requirements under Medicare Part A has an effective date or whether the guidance will be retroactive.

Response: The proposed revision of hospital inpatient admission orders documentation requirements under Medicare Part A will be effective for dates of admission occurring on or after October 1, 2018. Previous guidance in our manual regarding constructive satisfaction of hospital inpatient admission order requirements still applies to dates of admission before October 1, 2018, and will continue to apply after the effective date of this final rule.

Comment: Commenters were concerned that the proposal to revise 42 CFR 412.3(a) to remove the language stating that a physician order must be present in the medical record and be supported by the physician admission and progress notes, in order for the hospital to be paid for hospital inpatient services under Medicare Part A, will not reduce the administrative burden to providers. The commenters expressed that inpatient admissions will still be denied based solely on timeliness or completion of the

attending physician's order and that other Medicare regulations will be referenced as the source of denial.

Response: We will continue to stay engaged with medical review contractors, as we have historically, so that there is awareness and understanding of this revision. As indicated earlier, if necessary, we may revise our manuals and/or issue additional subregulatory guidance as needed.

Comment: Commenters also suggested alternative options to address CMS' concerns regarding hospital inpatient admission order documentation requirements under Medicare Part A, including policy proposals that would substantively change the 2-midnight rule.

Response: We did not propose changes to the 2-midnight rule with this proposal to revise hospital inpatient admission orders documentation requirements. However, we will continue to monitor this policy and may propose additional changes in future rulemaking, or issue further clarifications in subregulatory guidance, as necessary.

Comment: Some commenters believed that removing the hospital inpatient admission order documentation requirement will have negative effects on both the cost and quality of care by losing the assurance that a qualified physician has close involvement in the decision to admit the patient, that they are involved early in the patients care, and that admitting physicians are free from postdischarge financial pressures from the hospital.

Response: We refer readers to our impact discussion regarding this proposal in Appendix A – Economic Analyses, Section I.H.10. of the preamble of this final rule

where we state, “our actuaries estimate that any increase in Medicare payments due to the change will be negligible, given the anticipated low volume of claims that will be payable under this policy that would not have been paid under the current policy.” Furthermore and as stated earlier, this policy proposal would not change the requirement that a beneficiary becomes an inpatient when formally admitted as an inpatient under an order for inpatient admission (nor that the documentation must still otherwise meet medical necessity and coverage criteria); only that the documentation requirement for inpatient orders to be present in the medical record will no longer be a specific condition of Part A payment.

Comment: Some commenters expressed concern that the proposal to revise the inpatient admission order policy presents a problem for the capture of specific data elements necessary for compliance with electronic clinical quality measures.

Response: As indicated earlier, this proposal would not change the requirement that an individual is considered an inpatient if formally admitted as an inpatient under an order for inpatient admission. The physician order reflects affirmation by the ordering physician or other qualified practitioner that hospital inpatient services are medically necessary, and serves the purpose of initiating the inpatient admission and documenting the physician’s (or other qualified practitioner’s, as provided in the regulations) intent to admit the patient. Accordingly, inpatient admission order documentation information should continue to be available in electronic health records.

Comment: Commenters pointed out that this policy proposal only applies to the inpatient prospective payment system and that to encourage consistency across payment

systems and reduce documentation burden, CMS should make the same change to documentation requirements at other sites where there will be an inpatient admission, such as in psychiatry and rehabilitation. The commenters acknowledged that this will require rulemaking and encourages CMS to make these changes as soon as possible.

Response: We appreciate the recommendations made by the commenters and will take these comments into consideration in future rulemaking.

After consideration of the public comments we received, we are finalizing our proposal to revise the inpatient admission order policy to no longer require a written inpatient admission order to be present in the medical record as a specific condition of Medicare Part A payment. Specifically, we are finalizing our proposal to revise the regulation at 42 CFR 412.3(a) to remove the language stating that a physician order must be present in the medical record and be supported by the physician admission and progress notes, in order for the hospital to be paid for hospital inpatient services under Medicare Part A.

## **V. Changes to the IPPS for Capital-Related Costs**

### A. Overview

Section 1886(g) of the Act requires the Secretary to pay for the capital-related costs of inpatient acute hospital services in accordance with a prospective payment system established by the Secretary. Under the statute, the Secretary has broad authority in establishing and implementing the IPPS for acute care hospital inpatient capital-related costs. We initially implemented the IPPS for capital-related costs in the FY 1992 IPPS final rule (56 FR 43358). In that final rule, we established a 10-year transition period to change the payment methodology for Medicare hospital inpatient capital-related costs from a reasonable cost-based payment methodology to a prospective payment methodology (based fully on the Federal rate).

FY 2001 was the last year of the 10-year transition period that was established to phase in the IPPS for hospital inpatient capital-related costs. For cost reporting periods beginning in FY 2002, capital IPPS payments are based solely on the Federal rate for almost all acute care hospitals (other than hospitals receiving certain exception payments and certain new hospitals). (We refer readers to the FY 2002 IPPS final rule (66 FR 39910 through 39914) for additional information on the methodology used to determine capital IPPS payments to hospitals both during and after the transition period.)

The basic methodology for determining capital prospective payments using the Federal rate is set forth in the regulations at 42 CFR 412.312. For the purpose of calculating capital payments for each discharge, the standard Federal rate is adjusted as follows:

(Standard Federal Rate) x (DRG Weight) x (Geographic Adjustment Factor (GAF)) x (COLA for hospitals located in Alaska and Hawaii) x (1 + Capital DSH Adjustment Factor + Capital IME Adjustment Factor, if applicable).

In addition, under § 412.312(c), hospitals also may receive outlier payments under the capital IPPS for extraordinarily high-cost cases that qualify under the thresholds established for each fiscal year.

## B. Additional Provisions

### 1. Exception Payments

The regulations at 42 CFR 412.348 provide for certain exception payments under the capital IPPS. The regular exception payments provided under § 412.348(b) through (e) were available only during the 10-year transition period. For a certain period after the transition period, eligible hospitals may have received additional payments under the special exceptions provisions at § 412.348(g). However, FY 2012 was the final year hospitals could receive special exceptions payments. For additional details regarding these exceptions policies, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51725).

Under § 412.348(f), a hospital may request an additional payment if the hospital incurs unanticipated capital expenditures in excess of \$5 million due to extraordinary circumstances beyond the hospital's control. Additional information on the exception payment for extraordinary circumstances in § 412.348(f) can be found in the FY 2005 IPPS final rule (69 FR 49185 and 49186).

## 2. New Hospitals

Under the capital IPPS, the regulations at 42 CFR 412.300(b) define a new hospital as a hospital that has operated (under previous or current ownership) for less than 2 years and lists examples of hospitals that are not considered new hospitals. In accordance with § 412.304(c)(2), under the capital IPPS, a new hospital is paid 85 percent of its allowable Medicare inpatient hospital capital-related costs through its first 2 years of operation, unless the new hospital elects to receive full prospective payment based on 100 percent of the Federal rate. We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51725) for additional information on payments to new hospitals under the capital IPPS.

## 3. Payments for Hospitals Located in Puerto Rico

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57061), we revised the regulations at 42 CFR 412.374 relating to the calculation of capital IPPS payments to hospitals located in Puerto Rico beginning in FY 2017 to parallel the change in the statutory calculation of operating IPPS payments to hospitals located in Puerto Rico, for discharges occurring on or after January 1, 2016, made by section 601 of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113). Section 601 of Pub. L. 114-113 increased the applicable Federal percentage of the operating IPPS payment for hospitals located in Puerto Rico from 75 percent to 100 percent and decreased the applicable Puerto Rico percentage of the operating IPPS payments for hospitals located in Puerto Rico from 25 percent to zero percent, applicable to discharges occurring on or after January 1, 2016. As such, under revised § 412.374, for discharges occurring on or

after October 1, 2016, capital IPPS payments to hospitals located in Puerto Rico are based on 100 percent of the capital Federal rate.

C. Annual Update for FY 2019

The final annual update to the national capital Federal rate, as provided for in 42 CFR 412.308(c), for FY 2019 is discussed in section III. of the Addendum to this FY 2019 IPPS/LTCH PPS final rule.

In section II.D. of the preamble of this FY 2019 IPPS/LTCH PPS final rule, we present a discussion of the MS-DRG documentation and coding adjustment, including previously finalized policies and historical adjustments, as well as the adjustment to the standardized amount under section 1886(d) of the Act that we proposed and are finalizing for FY 2019, in accordance with the amendments made to section 7(b)(1)(B) of Pub. L. 110-90 by section 414 of the MACRA. Because these provisions require us to make an adjustment only to the operating IPPS standardized amount, we are not making a similar adjustment to the national capital Federal rate (or to the hospital-specific rates).

## **VI. Changes for Hospitals Excluded from the IPPS**

### A. Rate-of-Increase in Payments to Excluded Hospitals for FY 2019

Certain hospitals excluded from a prospective payment system, including children's hospitals, 11 cancer hospitals, and hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa) receive payment for inpatient hospital services they furnish on the basis of reasonable costs, subject to a rate-of-increase ceiling. A per discharge limit (the target amount, as defined in § 413.40(a) of the regulations) is set for each hospital based on the hospital's own cost experience in its base year, and updated annually by a rate-of-increase percentage. For each cost reporting period, the updated target amount is multiplied by total Medicare discharges during that period and applied as an aggregate upper limit (the ceiling as defined in § 413.40(a)) of Medicare reimbursement for total inpatient operating costs for a hospital's cost reporting period. In accordance with § 403.752(a) of the regulations, religious nonmedical health care institutions (RNHCIs) also are subject to the rate-of-increase limits established under § 413.40 of the regulations discussed previously. Furthermore, in accordance with § 412.526(c)(3) of the regulations, extended neoplastic disease care hospitals also are subject to the rate-of-increase limits established under § 413.40 of the regulations discussed previously.

As explained in the FY 2006 IPPS final rule (70 FR 47396 through 47398), beginning with FY 2006, we have used the percentage increase in the IPPS operating market basket to update the target amounts for children's hospitals, cancer hospitals, and

RNHCI. Consistent with the regulations at §§ 412.23(g), 413.40(a)(2)(ii)(A), and 413.40(c)(3)(viii), we also have used the percentage increase in the IPPS operating market basket to update target amounts for short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa. In the FYs 2014 and 2015 IPPS/LTCH PPS final rules (78 FR 50747 through 50748 and 79 FR 50156 through 50157, respectively), we adopted a policy of using the percentage increase in the FY 2010-based IPPS operating market basket to update the target amounts for FY 2014 and subsequent fiscal years for children's hospitals, cancer hospitals, RNHCIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa. However, in the FY 2018 IPPS/LTCH PPS final rule, we rebased and revised the IPPS operating basket to a 2014 base year, effective for FY 2018 and subsequent years (82 FR 38158 through 38175), and finalized the use of the percentage increase in the 2014-based IPPS operating market basket to update the target amounts for children's hospitals, the 11 cancer hospitals, RNHCIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa for FY 2018 and subsequent years. Accordingly, for FY 2019, the rate-of-increase percentage to be applied to the target amount for these hospitals is the FY 2019 percentage increase in the 2014-based IPPS operating market basket.

For the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20449), based on IGI's 2017 fourth quarter forecast, we estimated that the 2014-based IPPS operating market basket update for FY 2019 would be 2.8 percent (that is, the estimate of the market basket

rate-of-increase). Based on this estimate, we stated in the proposed rule that the FY 2019 rate-of-increase percentage that would be applied to the FY 2018 target amounts in order to calculate the FY 2019 target amounts for children's hospitals, cancer hospitals, RNCHIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa would be 2.8 percent, in accordance with the applicable regulations at 42 CFR 413.40. However, we indicated in the proposed rule that if more recent data became available for the final rule, we would use them to calculate the final IPPS operating market basket update for FY 2019. For this FY 2019 IPPS/LTCH PPS final rule, based on IGI's 2018 second quarter forecast (which is the most recent data available), we calculated the 2014-based IPPS operating market basket update for FY 2019 to be 2.9 percent. Therefore, the FY 2019 rate-of-increase percentage that is applied to the FY 2018 target amounts in order to calculate the FY 2019 target amounts for children's hospitals, cancer hospitals, RNCHIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa is 2.9 percent, in accordance with the applicable regulations at 42 CFR 413.40.

In addition, payment for inpatient operating costs for hospitals classified under section 1886(d)(1)(B)(vi) of the Act (which we refer to as "extended neoplastic disease care hospitals") for cost reporting periods beginning on or after January 1, 2015, is to be made as described in 42 CFR 412.526(c)(3), and payment for capital costs for these hospitals is to be made as described in 42 CFR 412.526(c)(4). (For additional information on these payment regulations, we refer readers to the FY 2018 IPPS/LTCH

PPS final rule (82 FR 38321 through 38322).) Section 412.526(c)(3) provides that the hospital's Medicare allowable net inpatient operating costs for that period are paid on a reasonable cost basis, subject to that hospital's ceiling, as determined under § 412.526(c)(1), for that period. Under section 412.526(c)(1), for each cost reporting period, the ceiling was determined by multiplying the updated target amount, as defined in § 412.526(c)(2), for that period by the number of Medicare discharges paid during that period. Section 412.526(c)(2)(i) describes the method for determining the target amount for cost reporting periods beginning during FY 2015. Section 412.526(c)(2)(ii) specifies that, for cost reporting periods beginning during fiscal years after FY 2015, the target amount will equal the hospital's target amount for the previous cost reporting period updated by the applicable annual rate-of-increase percentage specified in § 413.40(c)(3) for the subject cost reporting period (79 FR 50197).

For FY 2019, in accordance with § 412.22(i) and § 412.526(c)(2)(ii) of the regulations, for cost reporting periods beginning during FY 2019, the update to the target amount for long-term care neoplastic disease hospitals (that is, hospitals described under § 412.22(i)) is the applicable annual rate-of-increase percentage specified in § 413.40(c)(3) for FY 2019, which would be equal to the percentage increase in the hospital market basket index, which, in the proposed rule, was estimated to be the percentage increase in the 2014-based IPPS operating market basket (that is, the estimate of the market basket rate-of-increase). Accordingly, for the FY 2019 proposed rule, the update to an extended neoplastic disease care hospital's target amount for FY 2019 was 2.8 percent, which was based on IGI's 2017 fourth quarter forecast. Furthermore, we

proposed that if more recent data became available for the final rule, we would use that updated data to calculate the IPPS operating market basket update for FY 2019. For this final rule, based on IGI's second quarter 2018 forecast (which is the most recent data available), the update to an extended neoplastic disease care hospital's target amount for FY 2019 is 2.9 percent.

We did not receive any public comments in response to these proposals.

Therefore, we are finalizing them as proposed.

#### B. Changes to Regulations Governing Satellite Facilities

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38292 through 38294), we finalized a change to our hospital-within-hospital (HwH) regulations at 42 CFR 412.22(e) to only require, as of October 1, 2017, that IPPS-excluded HwHs that are co-located with IPPS hospitals comply with the separateness and control requirements in those regulations. We adopted this change because we believe that the policy concerns that underlay the previous HwH regulations (that is, inappropriate patient shifting and hospitals acting as illegal de facto units) are sufficiently moderated in situations where IPPS-excluded hospitals are co-located with each other, in large part due to changes that have been made to the way most types of IPPS-excluded hospitals are paid under Medicare. In response to our proposal on this issue, we received some public comments requesting that CMS make analogous changes to the rules governing satellite facilities, and we responded in the FY 2018 IPPS/LTCH PPS final rule that we would take that request under consideration for future rulemaking.

Under 42 CFR 412.22(h), a satellite facility is defined as part of a hospital that provides inpatient services in a building also used by another hospital, or in one or more entire buildings located on the same campus as buildings used by another hospital.

There are significant similarities between the definition of a satellite facility and the definition of an HwH as those definitions relate to their co-location with host hospitals. Our policies on satellite facilities have also been premised on many of the same concerns that formed the basis for our HwH policies. That is, the separateness and control policies for satellite facilities at 42 CFR 412.22(h) were aimed at mitigating our concern that the co-location of a satellite facility and a host hospital raised a potential for inappropriate patient shifting that we believed could be guided more by attempts to maximize Medicare reimbursements than by patient welfare (71 FR 48107). However, just as changes to the way most types of IPPS-excluded hospitals are paid under Medicare have sufficiently moderated this concern in situations where IPPS-excluded hospitals are co-located with each other, we believe that these payment changes also sufficiently moderate these concerns in situations where IPPS-excluded satellite facilities are co-located with IPPS-excluded host hospitals. Furthermore, we believe that there is no compelling policy rationale for treating satellite facilities and HwHs differently on the issue of separateness and control because there is no meaningful distinction between these types of facilities that would justify a satellite facility having to comply with separateness and control requirements in a situation in which an HwH would not be required to comply (we note that the separateness and control requirements for satellite facilities are not the same as those for HwHs; however, they are similar). Therefore, in

the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20450 and 20451), we proposed to revise our regulations at § 412.22(h)(2)(iii)(A) to only require IPPS-excluded satellite facilities that are co-located with IPPS hospitals to comply with the separateness and control requirements. Specifically, we proposed to add a new paragraph (4) to § 412.22(h)(2)(iii)(A) to specify that, effective on or after October 1, 2018, a satellite facility that is part of an IPPS-excluded hospital that provides inpatient services in a building also used by an IPPS-excluded hospital, or in one or more entire buildings located on the same campus as buildings used by an IPPS-excluded hospital, is not required to meet the criteria in § 412.22(h)(2)(iii)(A)(1) through (3) in order to be excluded from the IPPS. We stated that proposed new § 412.22(h)(2)(iii)(A)(4) would also specify that a satellite facility that is part of an IPPS-excluded hospital which is located in a building also used by an IPPS hospital, or in one or more entire buildings located on the same campus as buildings used by an IPPS hospital, is still required to meet the criteria in § 412.22 (h)(2)(iii)(A)(1) through (3) in order to be excluded from the IPPS.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20451), we also proposed that, for cost reporting periods beginning on or after October 1, 2019, an IPPS-excluded hospital would no longer be precluded from having an excluded psychiatric and/or rehabilitation unit. Consistent with our proposed changes to the regulations governing satellite facilities discussed earlier, we also proposed to add new paragraph (iv) to § 412.25(e)(2) to specify that an IPPS-excluded satellite facility of an IPPS-excluded unit of an IPPS-excluded hospital would not have to comply with the separateness and control

requirements so long as the satellite of the excluded unit is not co-located with an IPPS hospital, and to make conforming revisions to § 412.25(e)(2)(iii)(A) to subject that provision to paragraph (iv), which we are finalizing without modification after consideration of public comments, as discussed in section VI.C. of the preamble of this final rule.

In the FY 2019 IPPS/LTCH PPS proposed rule, we stated that it is important to point out that payment rules, such as the HwH or satellite facility rules, never waive or supersede the requirement that all hospitals must comply with the hospital conditions of participation (CoPs). All hospitals, regardless of payment status, must always demonstrate separate and independent compliance with the hospital CoPs, even when an entire hospital or a part of a hospital is located in a building also used by another hospital, or in one or more entire buildings located on the same campus as buildings used by another hospital. We further noted that the proposal would not affect IPPS-excluded satellite facilities that are co-located with IPPS hospitals that are currently grandfathered under § 412.22 (h)(2)(iii)(A)(2). Those satellite facilities would continue to maintain their IPPS-excluded status without complying with the separateness and control requirements so long as all applicable requirements at § 412.22(h) are met.

Comment: Several commenters supported CMS' proposals. Some commenters requested that CMS expand the scope of the proposal and exempt IPPS-excluded satellite facilities that are not co-located with IPPS hospitals from all separateness and control requirements in § 412.22(h)(2), not just those requirements at § 412.22(h)(2)(iii)(A)(1) through (3).

Response: We appreciate the commenters' support of our proposals. We have reviewed the remaining requirements in § 412.22(h)(2) and do not believe that it is appropriate to expand our proposals to excuse compliance with those requirements for IPPS-excluded satellite facilities that are not co-located with IPPS hospitals. For example, the commenter requested that satellite facilities be exempted from the requirement that they comply with the applicable payment rules which form the basis of their exclusion from the IPPS. We believe that such an exclusion fundamentally undermines the Medicare program and would advantage satellite facilities beyond any other hospital type. In addition, we believe that such an expanded proposal would advantage satellite facilities over HwHs (meaning that satellite facilities would be exempt from separateness and control requirements in situations in which an HwH would not be), and this directly contradicts our goal of bringing satellite facilities and HwH regulations into alignment.

We note that, in response to the proposed rule, several commenters addressed issues relating to HwHs and satellite facilities that were outside the scope of the proposals in the proposed rule related to the CoPs and our existing regulations concerning HwHs. We are not addressing those comments in this final rule. However, we may take them into consideration for future rulemaking.

After consideration of the public comments received, we are finalizing our proposals without modification. Specifically, we are adding a new paragraph (4) to § 412.22(h)(2)(iii)(A) to specify that, effective on or after October 1, 2018, a satellite facility that is part of an IPPS-excluded hospital that provides inpatient services in a

building also used by an IPPS-excluded hospital, or in one or more entire buildings located on the same campus as buildings used by an IPPS-excluded hospital, is not required to meet the criteria in § 412.22(h)(2)(iii)(A)(1) through (3) in order to be excluded from the IPPS. New § 412.22(h)(2)(iii)(A)(4) specifies that a satellite facility that is part of an IPPS-excluded hospital which is located in a building also used by an IPPS hospital, or in one or more entire buildings located on the same campus as buildings used by an IPPS hospital, is still required to meet the criteria in § 412.22 (h)(2)(iii)(A)(1) through (3) in order to be excluded from the IPPS.

#### C. Changes to Regulations Governing Excluded Units of Hospitals

Under existing regulations at 42 CFR 412.25, an excluded psychiatric or rehabilitation unit cannot be part of an institution that is excluded in its entirety from the IPPS. These regulations were codified in the FY 1994 IPPS final rule (58 FR 46318). However, as we explained in that rule, while this prohibition was not explicitly stated in the regulations until that time, the prohibition had been our longstanding policy. This policy was adopted at that time because it would have been redundant to allow an IPPS-excluded hospital to have an IPPS-excluded unit because both the hospital and the unit would have been paid under the same Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) payment system methodology, described in section VI.A. of this final rule. In addition, we were concerned about the possibility of IPPS-excluded hospitals artificially inflating their target amounts by operating IPPS-excluded units (58 FR 46318).

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38292 through 38294), we finalized a change to the HwH regulations to only require, as of October 1, 2017, that IPPS-excluded HwHs that are co-located with IPPS hospitals comply with the separateness and control requirements in those regulations. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20451), we proposed to make similar changes to the regulations governing satellite facilities, which would allow these facilities, including satellite facilities of hospital units, to maintain their IPPS-excluded status without complying with the separateness and control requirements so long as they are not co-located with an IPPS hospital. In conjunction with the HwH regulation changes and the proposed satellite facilities regulation changes, and as part of our continued efforts to reduce regulatory burden and achieve program simplification, we stated that we believe it is appropriate to propose changes to our regulations for the establishment of IPPS-excluded units in IPPS-excluded hospitals. Given the introduction of prospective payment systems for both inpatient rehabilitation facilities and units (collectively IRFs) and psychiatric hospitals and units (collectively IPFs), we indicated that we no longer believe it is redundant for an IPPS-excluded hospital to have an IPPS-excluded unit, nor is it possible for IPPS-excluded hospitals to use units to artificially inflate their target amounts, because Medicare payment for discharges from the units would not be based on reasonable cost. For example, under our proposal, an LTCH operating a psychiatric unit would receive payment under the IPF PPS for discharges from the psychiatric unit and payment under the LTCH PPS for discharges not from the psychiatric unit. Payment for discharges from the psychiatric unit would be made under the IPF PPS rather than the

LTCH PPS because Medicare pays for services provided by an excluded hospital unit under a separate payment system from the hospital in which the unit is a part. For the purposes of payment, services furnished by a unit are considered to be inpatient hospital services provided by the unit and not inpatient hospital services provided by the hospital operating the unit.

In the FY 2019 IPPS/LTCH PPS proposed rule, we proposed to revise § 412.25(a)(1)(ii) to specify that the requirement that an excluded psychiatric or rehabilitation unit cannot be part of an IPPS-excluded hospital is only effective through cost reporting periods beginning on or before September 30, 2019. Under the proposal, effective with cost reporting periods beginning on or after October 1, 2019, an IPPS-excluded hospital would be permitted to have an excluded psychiatric and/or rehabilitation unit. In addition, we proposed to revise § 412.25(d) to specify that an IPPS-excluded hospital may not have an IPPS-excluded unit of the same type (psychiatric or rehabilitation) as the hospital (for example, an IRF may not have an IRF unit). We stated that we believe that this proposed change would be consistent with the current preclusion in § 412.25(d) that prevents one hospital from having more than one of the same type of IPPS-excluded unit. However, we noted that if these proposed changes to the payment rules are finalized, an IPPS-excluded hospital operating an IPPS-excluded unit must continue to be in compliance with other Medicare regulations and CoPs applicable to the hospital or unit. An IPPS-excluded unit within a hospital is part of the hospital. Noncompliance with any of the hospital CoPs at 42 CFR 482.1 through 482.58 at any part of a certified hospital is noncompliance for the entire Medicare-certified

hospital. Therefore, noncompliance with the hospital CoPs in an IPPS excluded unit is CoP noncompliance for the entire certified hospital. For example, the CoPs that govern IPFs would apply to an IPF that operates an excluded rehabilitation unit, and those CoPs require that certain psychiatric treatment protocols apply to every IPF patient (including those in the rehabilitation unit).

We proposed that cost reporting periods beginning on or after October 1, 2019 would be the effective date of these changes to allow sufficient time for both CMS and IPPS-excluded hospitals to make the necessary administrative and operational changes to fully implement the proposed changes. We stated that we believed this proposed effective date would, to the best of our ability, ensure that these units can begin to operate without unnecessary administrative issues and delays.

Comment: Several commenters supported CMS' proposals to allow IPPS-excluded hospitals to operate IPPS-excluded units and to make the proposed change effective for cost reporting periods beginning on or after October 1, 2019. However, some of these commenters requested that CMS not delay the effective date until FY 2020 as proposed.

Response: We appreciate the commenters' support. While we appreciate that providers may wish to begin operating units as soon as possible, we believe that making the change effective for cost reporting periods beginning in FY 2019 is operationally not feasible, given the administrative and operational changes that must be made in order to fully implement this policy while minimizing unintended consequences of these changes.

Therefore, we are not changing the effective date of this policy change to make it earlier than FY 2020 as requested by the commenters.

Comment: Some commenters objected to CMS' proposal to allow IPPS-excluded hospitals to operate IPPS-excluded units. Specifically, these commenters objected to the fact that, if the proposal is finalized, an LTCH would be allowed to operate an IRF unit but an IRF would not be allowed to operate a "long-term care unit" and contended that this result is unfair. Some of these commenters also expressed concern about the effect of these proposals on patient care and believed that the proposed change is inconsistent with the hospital CoPs, which do not allow co-located hospitals to jointly meet the CoPs. Other commenters argued that CMS did not sufficiently explain the proposal in the proposed rule or CMS should have made other regulatory text changes, such as allowing long-term care units. Some commenters requested that CMS withdraw the proposal and provide more outreach activities or implement small-scale models prior to making a regulatory change.

Response: We believe the commenters may have misunderstood the crux of our proposal. Our proposal was not merely "to allow LTCHs to operate rehabilitation units." Rather, under our proposal, all types of IPPS-excluded hospitals (including both LTCHs and IRFs) would be able to operate all types of IPPS-excluded units (rehabilitation and psychiatric) so long as such a unit would not be in a hospital of the same type. While one of the possible outcome of this proposal would be an LTCH operating an IRF unit, the reason an IRF could not operate a distinct part long-term care unit (which would be paid under the LTCH PPS) is because the Act does not allow for long-term care units (as we

have stated on numerous occasions and some commenters acknowledged). However, we point out that, under our proposal, an IRF would be allowed to operate a psychiatric unit and a psychiatric hospital would also be allowed to operate a rehabilitation unit, as long as applicable CoPs are met.

While we appreciate the concern expressed by some commenters relating to the care accessible to Medicare beneficiaries, we disagree that such concerns are valid or germane to our proposed revisions. As discussed in more detail earlier, the reason why we prohibited IPPS-excluded hospitals from operating IPPS-excluded units was because we were concerned that the IPPS-excluded hospital could artificially manipulate its TEFRA ceiling. As we also discussed in more detail earlier, that concern is no longer valid, given reforms in payment systems for IPPS-excluded hospitals. Therefore, we believe it is appropriate to retire a policy that no longer serves its purpose. In addition, while the commenters stated their concern, they did not provide data or information to indicate that the proposed change would adversely affect patients nor did they indicate what data or information should be used in any analysis. We also note that our proposal would not impact the ability of an LTCH to offer rehabilitation services (which they currently can offer and are paid under the LTCH PPS) and that, under our proposal, IPPS hospitals can continue to operate IRF units. Similarly, in response to the commenters' request for additional outreach activities or small-scale models, it is unclear from the comments what purpose these outreach activities or small-scale models would serve (aside from delaying the implementation of the policy). Based on the number and variety of comments in response to our proposals, we believe our proposals and rationale for our

proposals as presented in the proposed rule provided sufficient information for stakeholders to opine on the issue. In particular, it is not clear to us what the commenters found insufficient, and we reiterate the previously referenced discussion from the proposed rule in which we discuss that the underlying concern for the prohibition on IPPS-excluded hospitals from operating IPPS-excluded units was based on payment concerns that are no longer valid, given the reforms to payment systems between when CMS adopted the policy and now. For these reasons, we are not withdrawing our proposal as the commenters requested.

With respect to the comment that the proposed changes are inconsistent with the hospital CoPs, as we stated earlier, our proposal to allow IPPS-excluded hospitals to operate IPPS-excluded units is a payment rule, which cannot supersede the hospital CoPs. We believe that our proposal is consistent with the CoPs as well as with the finalized changes to the separateness and control rules for HwHs and satellite facilities discussed in section VI.B. of the preamble of this final rule.

We note that, in response to the proposed rule, some commenters requested other changes in light of our proposals--for example, changing the hospital CoPs to allow additional integration between co-located hospitals--that were outside the scope of the provisions in the proposed rule. While we are not addressing those comments in this final rule, we will take these suggestions into consideration for possible future rulemaking.

Comment: Some commenters requested clarification regarding whether patients in units would be included in the calculation of an LTCH's average length of stay at

§ 412.23(e)(3). Some of these commenters believed that it was implied in our proposal that they would not be included.

Response: We are clarifying that the days that patients stay in psychiatric and rehabilitation units would be excluded from the calculation of an LTCH's average length of stay. Specifically, as LTCH patients with a principal diagnosis relating to a psychiatric or rehabilitation diagnosis must be paid under the site neutral rate, and as those LTCH patients site neutral days are not counted toward a facility's average length of stay calculation, we believe that excluding psychiatric and rehabilitation unit days from the calculation of the LTCH's average length of stay is the most appropriate policy. Furthermore, under policies discussed and finalized earlier, patients in IPPS-excluded units in an LTCH will not be paid under the LTCH PPS. In other instances in which an LTCH patient is not paid at an LTCH rate, such as patients under a Medicare Advantage plan, those patients are excluded from the average length of stay calculation. Therefore, we believe that treating unit patients similar to Medicare Advantage plan patients would ensure consistency in the program. As such, in this final rule, we are revising § 412.23(e)(3) by adding a new paragraph (vii) that specifies that, for cost reporting periods beginning on or after October 1, 2019, the Medicare inpatient days from patients treated in an IPPS-excluded unit will not be included in the Medicare average length of stay calculation.

Comment: Some commenters requested that CMS make a conforming change to § 412.25(a)(1)(iii) of the regulations in order to implement the proposals.

Response: Upon review of our proposals, we agree with the commenters that we should make a conforming change to the basis for exclusion requirements for IPPS-excluded units in § 412.25(a)(1)(iii), without which an IPPS-excluded unit would not be able to be co-located with an IPPS-excluded hospital, despite finalizing our proposal. Therefore, in finalizing changes to the regulations for IPPS-excluded units, we also are making a conforming change to § 412.25(a)(1)(iii) to avoid an inadvertent contradiction. Specifically, we are replacing the phrase “beds that are not excluded from the inpatient prospective payment system” currently in the regulations with the phrase “beds that are paid under the applicable payment system under which the hospital is paid.”

We received several public comments that addressed issues related to services provided in excluded units that were outside the scope of the provisions of the proposed rule. We are not addressing those comments in this final rule but may take them under consideration for future rulemaking.

After consideration of the public comments we received, we are finalizing our changes to § 412.25(a)(1)(ii) as proposed without modification, making a conforming change to § 412.25(a)(1)(iii) by replacing the phrase “beds that are not excluded from the inpatient prospective payment system” with the phrase “beds that are paid under the applicable payment system under which the hospital is paid”, as described earlier in our response to comments, revising § 412.25(d) to specify that an IPPS-excluded hospital may not have an IPPS-excluded unit of the same type (psychiatric or rehabilitation) as the

hospital, and revising § 412.23(e)(3) to specify that discharges from IPPS-excluded units will not be included in the calculation of an LTCH's average length of stay.

#### D. Report on Adjustment (Exception) Payments

Section 4419(b) of Pub. L. 105-33 requires the Secretary to publish annually in the **Federal Register** a report describing the total amount of adjustment payments made to excluded hospitals and hospital units by reason of section 1886(b)(4) of the Act during the previous fiscal year.

The process of requesting, adjusting, and awarding an adjustment payment is likely to occur over a 2-year period or longer. First, generally, an excluded hospital must file its cost report for the fiscal year in accordance with § 413.24(f)(2) of the regulations. The MAC reviews the cost report and issues a notice of provider reimbursement (NPR). Once the hospital receives the NPR, if its operating costs are in excess of the ceiling, the hospital may file a request for an adjustment payment. After the MAC receives the hospital's request in accordance with applicable regulations, the MAC or CMS, depending on the type of adjustment requested, reviews the request and determines if an adjustment payment is warranted. This determination is sometimes not made until more than 180 days after the date the request is filed because there are times when the request applications are incomplete and additional information must be requested in order to have a completed request application. However, in an attempt to provide interested parties with data on the most recent adjustment payments for which we have data, we are publishing data on adjustment payments that were processed by the MAC or CMS during FY 2017.

The table below includes the most recent data available from the MACs and CMS on adjustment payments that were adjudicated during FY 2017. As indicated above, the adjustments made during FY 2017 only pertain to cost reporting periods ending in years prior to FY 2017. Total adjustment payments made to excluded hospitals during FY 2017 are \$8,811,316. The table depicts for each class of hospitals, in the aggregate, the number of adjustment requests adjudicated, the excess operating costs over the ceiling, and the amount of the adjustment payments.

<b>Class of Hospital</b>	<b>Number</b>	<b>Excess Cost Over Ceiling</b>	<b>Adjustment Payments</b>
Children’s Hospitals	1	\$600,616	\$336,553
Cancer Hospitals	1	\$13,057,016	\$8,025,996
Religious Nonmedical Health Care Institution (RNHCI)	1	\$411,854	\$184,816
Psychiatric Unit	2	\$6,126,163	\$263,951
<b>Total</b>			\$8,811,316

E. Critical Access Hospitals (CAHs)

1. Background

Section 1820 of the Act provides for the establishment of Medicare Rural Hospital Flexibility Programs (MRHFPs), under which individual States may designate certain facilities as critical access hospitals (CAHs). Facilities that are so designated and meet the CAH conditions of participation under 42 CFR Part 485, Subpart F, will be certified as CAHs by CMS. Regulations governing payments to CAHs for services to Medicare beneficiaries are located in 42 CFR Part 413.

## 2. Frontier Community Health Integration Project (FCHIP) Demonstration

As discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20451 through 20453), section 123 of the Medicare Improvements for Patients and Providers Act of 2008 (Pub. L. 110–275), as amended by section 3126 of the Affordable Care Act, authorizes a demonstration project to allow eligible entities to develop and test new models for the delivery of health care services in eligible counties in order to improve access to and better integrate the delivery of acute care, extended care and other health care services to Medicare beneficiaries. The demonstration is titled “Demonstration Project on Community Health Integration Models in Certain Rural Counties,” and is commonly known as the Frontier Community Health Integration Project (FCHIP) demonstration.

The authorizing statute states the eligibility criteria for entities to be able to participate in the demonstration. An eligible entity, as defined in section 123(d)(1)(B) of Pub. L. 110–275, as amended, is an MRHFP grantee under section 1820(g) of the Act (that is, a CAH); and is located in a State in which at least 65 percent of the counties in the State are counties that have 6 or less residents per square mile.

The authorizing statute stipulates several other requirements for the demonstration. Section 123(d)(2)(B) of Pub. L. 110–275, as amended, limits participation in the demonstration to eligible entities in not more than 4 States. Section 123(f)(1) of Pub. L. 110–275 requires the demonstration project to be conducted for a 3-year period. In addition, section 123(g)(1)(B) of Pub. L. 110–275 requires that the demonstration be budget neutral. Specifically, this provision states that in conducting the

demonstration project, the Secretary shall ensure that the aggregate payments made by the Secretary do not exceed the amount which the Secretary estimates would have been paid if the demonstration project under the section were not implemented. Furthermore, section 123(i) of Pub. L. 110–275 states that the Secretary may waive such requirements of titles XVIII and XIX of the Act as may be necessary and appropriate for the purpose of carrying out the demonstration project, thus allowing the waiver of Medicare payment rules encompassed in the demonstration.

In January 2014, CMS released a request for applications (RFA) for the FCHIP demonstration. Using 2013 data from the U.S. Census Bureau, CMS identified Alaska, Montana, Nevada, North Dakota, and Wyoming as meeting the statutory eligibility requirement for participation in the demonstration. The RFA solicited CAHs in these five States to participate in the demonstration, stating that participation would be limited to CAHs in four of the States. To apply, CAHs were required to meet the eligibility requirements in the authorizing legislation, and, in addition, to describe a proposal to enhance health-related services that would complement those currently provided by the CAH and better serve the community's needs. In addition, in the RFA, CMS interpreted the eligible entity definition in the statute as meaning a CAH that receives funding through the MHRFP. The RFA identified four interventions, under which specific waivers of Medicare payment rules would allow for enhanced payment for telehealth, ambulance services, and home health services, and an increase in the number of swing beds available to furnish skilled nursing facility/nursing facility services. These waivers were formulated with the goal of increasing access to care with no net increase in costs.

Ten CAHs were selected for participation in the demonstration, which started on August 1, 2016. These CAHs are located in Montana, Nevada, and North Dakota, and they are participating in three of the four interventions identified in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57064 through 57065) and FY 2018 IPPS/LTCH PPS final rule (82 FR 38294 through 38296). Eight CAHs are participating in the telehealth intervention, three CAHs are participating in the skilled nursing facility/nursing facility bed intervention, and two CAHs are participating in the ambulance services intervention. Each CAH is allowed to participate in more than one of the interventions. None of the selected CAHs are participants in the home health intervention, which was the fourth intervention included in the RFA.

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57064 through 57065) and FY 2018 IPPS/LTCH PPS final rule (82 FR 38294 through 38296), we finalized a policy to address the budget neutrality requirement for the demonstration. As explained in the FY 2018 IPPS/LTCH PPS final rule, we based our selection of CAHs for participation with the goal of maintaining the budget neutrality of the demonstration on its own terms (that is, the demonstration will produce savings from reduced transfers and admissions to other health care providers, thus offsetting any increase in payments resulting from the demonstration). However, because of the small size of this demonstration and uncertainty associated with projected Medicare utilization and costs, we adopted a contingency plan to ensure that the budget neutrality requirement in section 123 of Pub. L. 110-275 is met. If analysis of claims data for Medicare beneficiaries receiving services at each of the participating CAHs, as well as from other data sources, including

cost reports for these CAHs, shows that increases in Medicare payments under the demonstration during the 3-year period are not sufficiently offset by reductions elsewhere, we will recoup the additional expenditures attributable to the demonstration through a reduction in payments to all CAHs nationwide. Because of the small scale of the demonstration, we indicated that we did not believe it would be feasible to implement budget neutrality by reducing payments to only the participating CAHs. Therefore, in the event that this demonstration is found to result in aggregate payments in excess of the amount that would have been paid if this demonstration were not implemented, we will comply with the budget neutrality requirement by reducing payments to all CAHs, not just those participating in the demonstration. We stated that we believe it is appropriate to make any payment reductions across all CAHs because the FCHIP demonstration is specifically designed to test innovations that affect delivery of services by the CAH provider category. We explained our belief that the language of the statutory budget neutrality requirement at section 123(g)(1)(B) of Pub. L. 110-275 permits the agency to implement the budget neutrality provision in this manner. The statutory language merely refers to ensuring that aggregate payments made by the Secretary do not exceed the amount which the Secretary estimates would have been paid if the demonstration project was not implemented, and does not identify the range across which aggregate payments must be held equal.

Based on actuarial analysis using cost report settlements for FYs 2013 and 2014, the demonstration is projected to satisfy the budget neutrality requirement and likely yield a total net savings. As we estimated for the FY 2019 IPPS/LTCH PPS proposed

rule, for this FY 2019 IPPS/LTCH PPS final rule, we estimate that the total impact of the payment recoupment will be no greater than 0.03 percent of CAHs' total Medicare payments within one fiscal year (that is, Medicare Part A and Part B). The final budget neutrality estimates for the FCHIP demonstration will be based on the demonstration period, which is August 1, 2016 through July 31, 2019.

The demonstration is projected to impact payments to participating CAHs under both Medicare Part A and Part B. As stated in the FY 2018 IPPS/LTCH PPS final rule, in the event the demonstration is found not to have been budget neutral, any excess costs will be recouped over a period of 3 cost reporting years, beginning in CY 2020. The 3-year period for recoupment will allow for a reasonable timeframe for the payment reduction and to minimize any impact on CAHs' operations. Therefore, because any reduction to CAH payments in order to recoup excess costs under the demonstration will not begin until CY 2020, this policy will have no impact for any national payment system for FY 2019.

We did not receive any public comments on our discussion of the FCHIP demonstration in the FY 2019 IPPS/LTCH PPS proposed rule.

## **VII. Changes to the Long-Term Care Hospital Prospective Payment System (LTCH PPS) for FY 2019**

### A. Background of the LTCH PPS

#### 1. Legislative and Regulatory Authority

Section 123 of the Medicare, Medicaid, and SCHIP (State Children's Health Insurance Program) Balanced Budget Refinement Act of 1999 (BBRA) (Pub. L. 106-113), as amended by section 307(b) of the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) (Pub. L. 106-554), provides for payment for both the operating and capital-related costs of hospital inpatient stays in long-term care hospitals (LTCHs) under Medicare Part A based on prospectively set rates. The Medicare prospective payment system (PPS) for LTCHs applies to hospitals that are described in section 1886(d)(1)(B)(iv) of the Act, effective for cost reporting periods beginning on or after October 1, 2002.

Section 1886(d)(1)(B)(iv)(I) of the Act originally defined an LTCH as a hospital which has an average inpatient length of stay (as determined by the Secretary) of greater than 25 days. Section 1886(d)(1)(B)(iv)(II) of the Act ("subclause II" LTCHs) also provided an alternative definition of LTCHs. However, section 15008 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255) amended section 1886 of the Act to exclude former "subclause II" LTCHs from being paid under the LTCH PPS and created a new category of IPPS-excluded hospitals, which we refer to as "extended neoplastic disease care hospitals"), to be paid as hospitals that were formally classified as "subclause (II)" LTCHs (82 FR 38298).

Section 123 of the BBRA requires the PPS for LTCHs to be a “per discharge” system with a diagnosis-related group (DRG) based patient classification system that reflects the differences in patient resources and costs in LTCHs.

Section 307(b)(1) of the BIPA, among other things, mandates that the Secretary shall examine, and may provide for, adjustments to payments under the LTCH PPS, including adjustments to DRG weights, area wage adjustments, geographic reclassification, outliers, updates, and a disproportionate share adjustment.

In the August 30, 2002 **Federal Register**, we issued a final rule that implemented the LTCH PPS authorized under the BBRA and BIPA (67 FR 55954). For the initial implementation of the LTCH PPS (FYs 2003 through FY 2007), the system used information from LTCH patient records to classify patients into distinct long-term care diagnosis-related groups (LTC-DRGs) based on clinical characteristics and expected resource needs. Beginning in FY 2008, we adopted the Medicare severity long-term care diagnosis-related groups (MS-LTC-DRGs) as the patient classification system used under the LTCH PPS. Payments are calculated for each MS-LTC-DRG and provisions are made for appropriate payment adjustments. Payment rates under the LTCH PPS are updated annually and published in the **Federal Register**.

The LTCH PPS replaced the reasonable cost-based payment system under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) (Pub. L. 97-248) for payments for inpatient services provided by an LTCH with a cost reporting period beginning on or after October 1, 2002. (The regulations implementing the TEFRA reasonable cost-based payment provisions are located at 42 CFR Part 413.) With the implementation of the PPS

for acute care hospitals authorized by the Social Security Amendments of 1983 (Pub. L. 98-21), which added section 1886(d) to the Act, certain hospitals, including LTCHs, were excluded from the PPS for acute care hospitals and were paid their reasonable costs for inpatient services subject to a per discharge limitation or target amount under the TEFRA system. For each cost reporting period, a hospital-specific ceiling on payments was determined by multiplying the hospital's updated target amount by the number of total current year Medicare discharges. (Generally, in this section of the preamble of this final rule, when we refer to discharges, we describe Medicare discharges.) The August 30, 2002 final rule further details the payment policy under the TEFRA system (67 FR 55954).

In the August 30, 2002 final rule, we provided for a 5-year transition period from payments under the TEFRA system to payments under the LTCH PPS. During this 5-year transition period, an LTCH's total payment under the PPS was based on an increasing percentage of the Federal rate with a corresponding decrease in the percentage of the LTCH PPS payment that is based on reasonable cost concepts, unless an LTCH made a one-time election to be paid based on 100 percent of the Federal rate. Beginning with LTCHs' cost reporting periods beginning on or after October 1, 2006, total LTCH PPS payments are based on 100 percent of the Federal rate.

In addition, in the August 30, 2002 final rule, we presented an in-depth discussion of the LTCH PPS, including the patient classification system, relative weights, payment rates, additional payments, and the budget neutrality requirements mandated by section 123 of the BBRA. The same final rule that established regulations for the LTCH PPS

under 42 CFR Part 412, Subpart O, also contained LTCH provisions related to covered inpatient services, limitation on charges to beneficiaries, medical review requirements, furnishing of inpatient hospital services directly or under arrangement, and reporting and recordkeeping requirements. We refer readers to the August 30, 2002 final rule for a comprehensive discussion of the research and data that supported the establishment of the LTCH PPS (67 FR 55954).

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49601 through 49623), we implemented the provisions of the Pathway for Sustainable Growth Rate (SGR) Reform Act of 2013 (Pub. L. 113-67), which mandated the application of the “site neutral” payment rate under the LTCH PPS for discharges that do not meet the statutory criteria for exclusion beginning in FY 2016. For cost reporting periods beginning on or after October 1, 2015, discharges that do not meet certain statutory criteria for exclusion are paid based on the site neutral payment rate. Discharges that do meet the statutory criteria continue to receive payment based on the LTCH PPS standard Federal payment rate. For more information on the statutory requirements of the Pathway for SGR Reform Act of 2013, we refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49601 through 49623) and the FY 2017 IPPS/LTCH PPS final rule (81 FR 57068 through 57075).

In the FY 2018 IPPS/LTCH PPS final rule, we implemented several provisions of the 21<sup>st</sup> Century Cures Act (“the Cures Act”) (Pub. L. 114-255) that affected the LTCH PPS:

- Section 15004(a), which changed the moratorium on increasing the number of beds in existing LTCHs and LTCH satellite facilities. However, we note that this moratorium expired effective October 1, 2017.

- Section 15004(b), which specifies that, beginning in FY 2018, the estimated aggregate amount of HCO payments in a given year is equal to 99.6875 percent of the 8 percent estimated aggregate payments for standard Federal payment rate cases (that is, 7.975 percent) while requiring that we adjust the standard Federal payment rate each year to ensure budget neutrality for HCO payments as if estimated aggregate HCO payments made for standard Federal payment rate discharges remained at 8 percent as done through our previous regulatory requirement. (We note these provisions do not apply with respect to the computation of the applicable site neutral payment rate under section 1886(m)(6) of the Act.)

- Section 15006, which amended sections 114(c)(1)(A) and (c)(2) of the MMSEA, which provided a statutory extension on the moratoria on the full implementation of the 25-percent threshold policy on LTCH PPS discharges for LTCHs governed under § 412.534, § 412.536, and § 412.538 based on the LTCH's cost reporting period beginning dates. In addition to the statutory moratorium, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38318 through 38320), we also implemented a 1-year regulatory delay on the full implementation of the 25-percent threshold policy under § 412.538.

- Section 15007, which extends the exclusion of Medicare Advantage plans' and site neutral payment rate discharges from the calculation of the average length of stay for

all LTCHs, for discharges occurring in any cost reporting period beginning on or after October 1, 2015.

- Section 15008, which changed the classification of certain hospitals.

Specifically, section 15008 of Pub. L. 114-255 provided for the change in Medicare classification for “subclause (II)” LTCHs by redesignating such hospitals from section 1886(d)(1)(B)(iv)(II) of the Act to section 1886(d)(1)(B)(vi) of the Act, which is described earlier.

- Section 15009, which provides for a temporary exception to the site neutral payment rate for certain spinal cord specialty hospitals for discharges occurring in cost reporting periods beginning during FY 2018 and 2019 for LTCHs that meet specified statutory criteria to be excepted from the site neutral payment rate.

- Section 15010, which created a new temporary exception to the site neutral payment rate for certain severe wound discharges from certain LTCHs during such LTCHs’ cost reporting periods beginning during FY 2018.

As we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20465), we are making conforming changes to our regulations to implement the provisions of section 51005 of the Bipartisan Budget Act of 2018, Pub. L. 115-123, which extends the transitional blended payment rate for site neutral payment rate cases for an additional 2 years. We refer readers to section VII.C of the preamble of this final rule for a discussion of our final policy.

We received several public comments that addressed issues that were outside the scope of the FY 2019 proposed rule. Therefore we are not responding to them in this final rule. We may take these public comments under consideration in future rulemaking.

## 2. Criteria for Classification as an LTCH

### a. Classification as an LTCH

Under the regulations at § 412.23(e)(1), to qualify to be paid under the LTCH PPS, a hospital must have a provider agreement with Medicare. Furthermore, § 412.23(e)(2)(i), which implements section 1886(d)(1)(B)(iv) of the Act, requires that a hospital have an average Medicare inpatient length of stay of greater than 25 days to be paid under the LTCH PPS. In accordance with section 1206(a)(3) of the Pathway for SGR Reform Act of 2013 (Pub. L. 113-67), as amended by section 15007 of Pub. L. 114-255, we amended our regulations to specify that Medicare Advantage plans' and site neutral payment rate discharges are excluded from the calculation of the average length of stay for all LTCHs, for discharges occurring in cost reporting period beginning on or after October 1, 2015.

### b. Hospitals Excluded from the LTCH PPS

The following hospitals are paid under special payment provisions, as described in § 412.22(c) and, therefore, are not subject to the LTCH PPS rules:

- Veterans Administration hospitals.
- Hospitals that are reimbursed under State cost control systems approved under 42 CFR Part 403.

- Hospitals that are reimbursed in accordance with demonstration projects authorized under section 402(a) of the Social Security Amendments of 1967 (Pub. L. 90-248) (42 U.S.C. 1395b-1), section 222(a) of the Social Security Amendments of 1972 (Pub. L. 92-603) (42 U.S.C. 1395b-1 (note)) (Statewide all-payer systems, subject to the rate-of-increase test at section 1814(b) of the Act), or section 3201 of the Patient Protection and Affordable Care Act (Pub. L. 111-148 (42 U.S.C. 1315a)).
- Nonparticipating hospitals furnishing emergency services to Medicare beneficiaries.

### 3. Limitation on Charges to Beneficiaries

In the August 30, 2002 final rule, we presented an in-depth discussion of beneficiary liability under the LTCH PPS (67 FR 55974 through 55975). This discussion was further clarified in the RY 2005 LTCH PPS final rule (69 FR 25676). In keeping with those discussions, if the Medicare payment to the LTCH is the full LTC-DRG payment amount, consistent with other established hospital prospective payment systems, § 412.507 currently provides that an LTCH may not bill a Medicare beneficiary for more than the deductible and coinsurance amounts as specified under §§ 409.82, 409.83, and 409.87 and for items and services specified under § 489.30(a). However, under the LTCH PPS, Medicare will only pay for days for which the beneficiary has coverage until the short-stay outlier (SSO) threshold is exceeded. If the Medicare payment was for a SSO case (§ 412.529), and that payment was less than the full LTC-DRG payment amount because the beneficiary had insufficient remaining Medicare days, the LTCH is currently also permitted to charge the beneficiary for services delivered on those

uncovered days (§ 412.507). In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49623), we amended our regulations to expressly limit the charges that may be imposed on beneficiaries whose discharges are paid at the site neutral payment rate under the LTCH PPS. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57102), we amended the regulations under § 412.507 to clarify our existing policy that blended payments made to an LTCH during its transitional period (that is, payment for discharges occurring in cost reporting periods beginning in FY 2016 or 2017) are considered to be site neutral payment rate payments.

## B. Medicare Severity Long-Term Care Diagnosis-Related Group (MS-LTC-DRG)

### Classifications and Relative Weights for FY 2019

#### 1. Background

Section 123 of the BBRA required that the Secretary implement a PPS for LTCHs to replace the cost-based payment system under TEFRA. Section 307(b)(1) of the BIPA modified the requirements of section 123 of the BBRA by requiring that the Secretary examine the feasibility and the impact of basing payment under the LTCH PPS on the use of existing (or refined) hospital DRGs that have been modified to account for different resource use of LTCH patients.

When the LTCH PPS was implemented for cost reporting periods beginning on or after October 1, 2002, we adopted the same DRG patient classification system utilized at that time under the IPPS. As a component of the LTCH PPS, we refer to this patient classification system as the “long-term care diagnosis-related groups (LTC-DRGs).” Although the patient classification system used under both the LTCH PPS and the IPPS are the same, the relative weights are different. The established relative weight methodology and data used under the LTCH PPS result in relative weights under the LTCH PPS that reflect the differences in patient resource use of LTCH patients, consistent with section 123(a)(1) of the BBRA (Pub. L. 106-113).

As part of our efforts to better recognize severity of illness among patients, in the FY 2008 IPPS final rule with comment period (72 FR 47130), the MS-DRGs and the Medicare severity long-term care diagnosis-related groups (MS-LTC-DRGs) were adopted under the IPPS and the LTCH PPS, respectively, effective beginning

October 1, 2007 (FY 2008). For a full description of the development, implementation, and rationale for the use of the MS-DRGs and MS-LTC-DRGs, we refer readers to the FY 2008 IPPS final rule with comment period (72 FR 47141 through 47175 and 47277 through 47299). (We note that, in that same final rule, we revised the regulations at § 412.503 to specify that for LTCH discharges occurring on or after October 1, 2007, when applying the provisions of 42 CFR Part 412, Subpart O applicable to LTCHs for policy descriptions and payment calculations, all references to LTC-DRGs would be considered a reference to MS-LTC-DRGs. For the remainder of this section, we present the discussion in terms of the current MS-LTC-DRG patient classification system unless specifically referring to the previous LTC-DRG patient classification system that was in effect before October 1, 2007.)

The MS-DRGs adopted in FY 2008 represent an increase in the number of DRGs by 207 (that is, from 538 to 745) (72 FR 47171). The MS-DRG classifications are updated annually. There are currently 757 MS-DRG groupings. For FY 2019, there are 761 MS-DRG groupings based on the changes, as discussed in section II.F. of the preamble of this FY 2019 IPPS/LTCH PPS final rule. Consistent with section 123 of the BBRA, as amended by section 307(b)(1) of the BIPA, and § 412.515 of the regulations, we use information derived from LTCH PPS patient records to classify LTCH discharges into distinct MS-LTC-DRGs based on clinical characteristics and estimated resource needs. We then assign an appropriate weight to the MS-LTC-DRGs to account for the difference in resource use by patients exhibiting the case complexity and multiple medical problems characteristic of LTCHs.

In this section of the final rule, we provide a general summary of our existing methodology for determining the FY 2019 MS-LTC-DRG relative weights under the LTCH PPS.

As we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20455), in general, for FY 2019, we are continuing to use our existing methodology to determine the MS-LTC-DRG relative weights (as discussed in greater detail in section VII.B.3. of the preamble of this final rule). As we established when we implemented the dual rate LTCH PPS payment structure codified under § 412.522, which began in FY 2016, as we proposed, the annual recalibration of the MS-LTC-DRG relative weights are determined: (1) using only data from available LTCH PPS claims that would have qualified for payment under the new LTCH PPS standard Federal payment rate if that rate had been in effect at the time of discharge when claims data from time periods before the dual rate LTCH PPS payment structure applies are used to calculate the relative weights; and (2) using only data from available LTCH PPS claims that qualify for payment under the new LTCH PPS standard Federal payment rate when claims data from time periods after the dual rate LTCH PPS payment structure applies are used to calculate the relative weights (80 FR 49624). That is, under our current methodology, our MS-LTC-DRG relative weight calculations do not use data from cases paid at the site neutral payment rate under § 412.522(c)(1) or data from cases that would have been paid at the site neutral payment rate if the dual rate LTCH PPS payment structure had been in effect at the time of that discharge. For the remainder of this discussion, we use the phrase “applicable LTCH cases” or “applicable LTCH data” when referring to the resulting claims data set

used to calculate the relative weights (as described later in greater detail in section VII.B.3.c. of the preamble of this final rule). In addition, in this FY 2019 IPPS/LTCH PPS final rule, for FY 2019, as we proposed, we are continuing to exclude the data from all-inclusive rate providers and LTCHs paid in accordance with demonstration projects, as well as any Medicare Advantage claims from the MS-LTC-DRG relative weight calculations for the reasons discussed in section VII.B.3.c. of the preamble of this final rule.

Furthermore, for FY 2019, in using data from applicable LTCH cases to establish MS-LTC-DRG relative weights, as we proposed, we are continuing to establish low-volume MS-LTC-DRGs (that is, MS-LTC-DRGs with less than 25 cases) using our quintile methodology in determining the MS-LTC-DRG relative weights because LTCHs do not typically treat the full range of diagnoses as do acute care hospitals. Therefore, for purposes of determining the relative weights for the large number of low-volume MS-LTC-DRGs, we grouped all of the low-volume MS-LTC-DRGs into five quintiles based on average charges per discharge. Then, under our existing methodology, we accounted for adjustments made to LTCH PPS standard Federal payments for short-stay outlier (SSO) cases (that is, cases where the covered length of stay at the LTCH is less than or equal to five-sixths of the geometric average length of stay for the MS-LTC-DRG), and we made adjustments to account for nonmonotonically increasing weights, when necessary. The methodology is premised on more severe cases under the MS-LTC-DRG system requiring greater expenditure of medical care resources and higher average charges such that, in the severity levels within a base MS-LTC-DRG, the relative

weights should increase monotonically with severity from the lowest to highest severity level. (We discuss each of these components of our MS-LTC-DRG relative weight methodology in greater detail in section VII.B.3.g. of the preamble of this final rule.)

## 2. Patient Classifications into MS-LTC-DRGs

### a. Background

The MS-DRGs (used under the IPPS) and the MS-LTC-DRGs (used under the LTCH PPS) are based on the CMS DRG structure. As noted previously in this section, we refer to the DRGs under the LTCH PPS as MS-LTC-DRGs although they are structurally identical to the MS-DRGs used under the IPPS.

The MS-DRGs are organized into 25 major diagnostic categories (MDCs), most of which are based on a particular organ system of the body; the remainder involve multiple organ systems (such as MDC 22, Burns). Within most MDCs, cases are then divided into surgical DRGs and medical DRGs. Surgical DRGs are assigned based on a surgical hierarchy that orders operating room (O.R.) procedures or groups of O.R. procedures by resource intensity. The GROUPER software program does not recognize all ICD-10-PCS procedure codes as procedures affecting DRG assignment. That is, procedures that are not surgical (for example, EKGs), or minor surgical procedures (for example, a biopsy of skin and subcutaneous tissue (procedure code 0JBH3ZX)) do not affect the MS-LTC-DRG assignment based on their presence on the claim.

Generally, under the LTCH PPS, a Medicare payment is made at a predetermined specific rate for each discharge that varies based on the MS-LTC-DRG to which a

beneficiary's discharge is assigned. Cases are classified into MS-LTC-DRGs for payment based on the following six data elements:

- Principal diagnosis;
- Additional or secondary diagnoses;
- Surgical procedures;
- Age;
- Sex; and
- Discharge status of the patient.

Currently, for claims submitted using version ASC X12 5010 format, up to 25 diagnosis codes and 25 procedure codes are considered for an MS-DRG assignment. This includes one principal diagnosis and up to 24 secondary diagnoses for severity of illness determinations. (For additional information on the processing of up to 25 diagnosis codes and 25 procedure codes on hospital inpatient claims, we refer readers to section II.G.11.c. of the preamble of the FY 2011 IPPS/LTCH PPS final rule (75 FR 50127).)

Under the HIPAA transactions and code sets regulations at 45 CFR Parts 160 and 162, covered entities must comply with the adopted transaction standards and operating rules specified in Subparts I through S of Part 162. Among other requirements, on or after January 1, 2012, covered entities were required to use the ASC X12 Standards for Electronic Data Interchange Technical Report Type 3--Health Care Claim: Institutional (837), May 2006, ASC X12N/005010X223, and Type 1 Errata to Health Care Claim: Institutional (837) ASC X12 Standards for Electronic Data Interchange Technical Report

Type 3, October 2007, ASC X12N/005010X233A1 for the health care claims or equivalent encounter information transaction (45 CFR 162.1102(c)).

HIPAA requires covered entities to use the applicable medical data code set requirements when conducting HIPAA transactions (45 CFR 162.1000). Currently, upon the discharge of the patient, the LTCH must assign appropriate diagnosis and procedure codes from the most current version of the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) for diagnosis coding and the International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS) for inpatient hospital procedure coding, both of which were required to be implemented October 1, 2015 (45 CFR 162.1002(c)(2) and (3)). For additional information on the implementation of the ICD-10 coding system, we refer readers to section II.F.1. of the FY 2017 IPPS/LTCH PPS final rule (81 FR 56787 through 56790) and section II.F.1. of the preamble of this final rule. Additional coding instructions and examples are published in the AHA's Coding Clinic for ICD-10-CM/PCS.

To create the MS-DRGs (and by extension, the MS-LTC-DRGs), base DRGs were subdivided according to the presence of specific secondary diagnoses designated as complications or comorbidities (CCs) into one, two, or three levels of severity, depending on the impact of the CCs on resources used for those cases. Specifically, there are sets of MS-DRGs that are split into 2 or 3 subgroups based on the presence or absence of a CC or a major complication or comorbidity (MCC). We refer readers to section II.D. of the FY 2008 IPPS final rule with comment period for a detailed discussion about the creation of MS-DRGs based on severity of illness levels (72 FR 47141 through 47175).

MACs enter the clinical and demographic information submitted by LTCHs into their claims processing systems and subject this information to a series of automated screening processes called the Medicare Code Editor (MCE). These screens are designed to identify cases that require further review before assignment into a MS-LTC-DRG can be made. During this process, certain cases are selected for further explanation (74 FR 43949).

After screening through the MCE, each claim is classified into the appropriate MS-LTC-DRG by the Medicare LTCH GROUPER software on the basis of diagnosis and procedure codes and other demographic information (age, sex, and discharge status). The GROUPER software used under the LTCH PPS is the same GROUPER software program used under the IPPS. Following the MS-LTC-DRG assignment, the MAC determines the prospective payment amount by using the Medicare PRICER program, which accounts for hospital-specific adjustments. Under the LTCH PPS, we provide an opportunity for LTCHs to review the MS-LTC-DRG assignments made by the MAC and to submit additional information within a specified timeframe as provided in § 412.513(c).

The GROUPER software is used both to classify past cases to measure relative hospital resource consumption to establish the MS-LTC-DRG relative weights and to classify current cases for purposes of determining payment. The records for all Medicare hospital inpatient discharges are maintained in the MedPAR file. The data in this file are used to evaluate possible MS-DRG and MS-LTC-DRG classification changes and to

recalibrate the MS-DRG and MS-LTC-DRG relative weights during our annual update under both the IPPS (§ 412.60(e)) and the LTCH PPS (§ 412.517), respectively.

b. Changes to the MS-LTC-DRGs for FY 2019

As specified by our regulations at § 412.517(a), which require that the MS-LTC-DRG classifications and relative weights be updated annually, and consistent with our historical practice of using the same patient classification system under the LTCH PPS as is used under the IPPS, in this FY 2019 IPPS/LTCH PPS final rule, as we proposed, we updated the MS-LTC-DRG classifications effective October 1, 2018, through September 30, 2019 (FY 2019), consistent with the changes to specific MS-DRG classifications presented in section II.F. of the preamble of this final rule. Accordingly, the MS-LTC-DRGs for FY 2019 presented in this final rule are the same as the MS-DRGs that are being used under the IPPS for FY 2019. In addition, because the MS-LTC-DRGs for FY 2019 are the same as the MS-DRGs for FY 2019, the other changes that affect MS-DRG (and by extension MS-LTC-DRG) assignments under GROUPER Version 36 as discussed in section II.F. of the preamble of this final rule, including the changes to the MCE software and the ICD-10–CM/PCS coding system, also are applicable under the LTCH PPS for FY 2019.

3. Development of the FY 2019 MS-LTC-DRG Relative Weights

a. General Overview of the Development of the MS-LTC-DRG Relative Weights

One of the primary goals for the implementation of the LTCH PPS is to pay each LTCH an appropriate amount for the efficient delivery of medical care to Medicare patients. The system must be able to account adequately for each LTCH's case-mix in

order to ensure both fair distribution of Medicare payments and access to adequate care for those Medicare patients whose care is more costly (67 FR 55984). To accomplish these goals, we have annually adjusted the LTCH PPS standard Federal prospective payment rate by the applicable relative weight in determining payment to LTCHs for each case. In order to make these annual adjustments under the dual rate LTCH PPS payment structure, beginning with FY 2016, we recalibrate the MS-LTC-DRG relative weighting factors annually using data from applicable LTCH cases (80 FR 49614 through 49617). Under this policy, the resulting MS-LTC-DRG relative weights would continue to be used to adjust the LTCH PPS standard Federal payment rate when calculating the payment for LTCH PPS standard Federal payment rate cases.

The established methodology to develop the MS-LTC-DRG relative weights is generally consistent with the methodology established when the LTCH PPS was implemented in the August 30, 2002 LTCH PPS final rule (67 FR 55989 through 55991). However, there have been some modifications of our historical procedures for assigning relative weights in cases of zero volume and/or nonmonotonicity resulting from the adoption of the MS-LTC-DRGs, along with the change made in conjunction with the implementation of the dual rate LTCH PPS payment structure beginning in FY 2016 to use LTCH claims data from only LTCH PPS standard Federal payment rate cases (or LTCH PPS cases that would have qualified for payment under the LTCH PPS standard Federal payment rate if the dual rate LTCH PPS payment structure had been in effect at the time of the discharge). (For details on the modifications to our historical procedures for assigning relative weights in cases of zero volume and/or nonmonotonicity, we refer

readers to the FY 2008 IPPS final rule with comment period (72 FR 47289 through 47295) and the FY 2009 IPPS final rule (73 FR 48542 through 48550).) For details on the change in our historical methodology to use LTCH claims data only from LTCH PPS standard Federal payment rate cases (or cases that would have qualified for such payment had the LTCH PPS dual payment rate structure been in effect at the time) to determine the MS-LTC-DRG relative weights, we refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49614 through 49617). Under the LTCH PPS, relative weights for each MS-LTC-DRG are a primary element used to account for the variations in cost per discharge and resource utilization among the payment groups (§ 412.515). To ensure that Medicare patients classified to each MS-LTC-DRG have access to an appropriate level of services and to encourage efficiency, we calculate a relative weight for each MS-LTC-DRG that represents the resources needed by an average inpatient LTCH case in that MS-LTC-DRG. For example, cases in an MS-LTC-DRG with a relative weight of 2 would, on average, cost twice as much to treat as cases in an MS-LTC-DRG with a relative weight of 1.

b. Development of the MS-LTC-DRG Relative Weights for FY 2019

In this FY 2019 IPPS/LTCH PPS final rule, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20456), we are continuing to use our current methodology to determine the MS-LTC-DRG relative weights for FY 2019, including the continued application of established policies related to: the hospital-specific relative value methodology, the treatment of severity levels in the MS-LTC-DRGs, low-volume and no-volume MS-LTC-DRGs, adjustments for nonmonotonicity, the steps for

calculating the MS-LTC-DRG relative weights with a budget neutrality factor, and only using data from applicable LTCH cases (which includes our policy of only using cases that would meet the criteria for exclusion from the site neutral payment rate (or, for discharges occurring prior to the implementation of the dual rate LTCH PPS payment structure, would have met the criteria for exclusion had those criteria been in effect at the time of the discharge)).

In this section, we present our application of our existing methodology for determining the MS-LTC-DRG relative weights for FY 2019, and we discuss the effects of our policies concerning the data used to determine the FY 2019 MS-LTC-DRG relative weights on the various components of our existing methodology in the discussion that follows.

In previous fiscal years, Table 13A—Composition of Low-Volume Quintiles for MS-LTC-DRGs (which was listed in section VI. of the Addendum to the proposed and final rules and available via the Internet on the CMS website) listed the composition of the low-volume quintiles for MS-LTC-DRGs for the respective year, and Table 13B—No-Volume MS-LTC-DRG Crosswalk (also listed in section VI. of the Addendum to the proposed rule final rules and available via the Internet on the CMS website) listed the no-volume MS-LTC-DRGs and the MS-LTC-DRGs to which each was cross-walked (that is, the cross-walked MS-LTC-DRGs). The information contained in Tables 13A and 13B is used in the development Table 11--MS-LTC-DRGs, Relative Weights, Geometric Average Length of Stay, and Short-Stay Outlier (SSO) Threshold for LTCH PPS Discharges, which contains the proposed and final MS-LTC-DRGs and their

respective proposed and final relative weights, geometric mean length of stay, and five-sixths of the geometric mean length of stay (used to identify SSO cases) for the respective fiscal year (and also is listed in section VI. of the Addendum to the proposed and final rules and is available via the Internet on the CMS website). Because the information contained in Tables 13A and 13B does not contain payment rates or factors for the applicable payment year, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20457), we proposed to generally provide the data previously published in Tables 13A and 13B for each annual proposed and final rule as one of our supplemental IPPS/LTCH PPS related data files that are made available for public use via the Internet on the CMS website for the respective rule and fiscal year (that is, FY 2019 and subsequent fiscal years) at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. To streamline the information made available to the public that is used in the annual development of Table 11, we stated we believe that this proposed change in the presentation of the information contained in Tables 13A and 13B will make it easier for the public to navigate and find the relevant data and information used for the development of proposed and final payment rates or factors for the applicable payment year while continuing to furnish the same information the tables provided in previous fiscal years.

We did not receive any public comments on these proposals. Therefore, we are finalizing, without modification, the proposals and the continued use of the existing policies, as proposed.

## c. Data

For the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20457), consistent with our proposals regarding the calculation of the proposed MS-LTC-DRG relative weights for FY 2019, we obtained total charges from FY 2017 Medicare LTCH claims data from the December 2017 update of the FY 2017 MedPAR file, which was the best available data at that time, and we proposed to use Version 36 of the GROUPER to classify LTCH cases. Consistent with our historical practice, we proposed that if more recent data become available, we would use those data and the finalized Version 36 of the GROUPER in establishing the FY 2019 MS-LTC-DRG relative weights in the final rule. For this final rule, based on updated from FY 2017 Medicare LTCH claims data from the March 2018 update of the FY 2017 MedPAR file, which is the best available data at the time of development of this final rule, and we used Version 36 of the GROUPER to classify LTCH cases. To calculate the FY 2019 MS-LTC-DRG relative weights under the dual rate LTCH PPS payment structure, as we proposed, we continued to use applicable LTCH data, which includes our policy of only using cases that meet the criteria for exclusion from the site neutral payment rate (or would have met the criteria had they been in effect at the time of the discharge) (80 FR 49624). Specifically, we began by first evaluating the LTCH claims data in the March 2018 update of the FY 2017 MedPAR file to determine which LTCH cases would meet the criteria for exclusion from the site neutral payment rate under § 412.522(b) had the dual rate LTCH PPS payment structure applied to those cases at the time of discharge. We identified the FY 2017 LTCH cases that were not assigned to MS-LTC-DRGs 876, 880, 881, 882, 883, 884, 885,

886, 887, 894, 895, 896, 897, 945 and 946, which identify LTCH cases that do not have a principal diagnosis relating to a psychiatric diagnosis or to rehabilitation; and that either—

- The admission to the LTCH was “immediately preceded” by discharge from a subsection (d) hospital and the immediately preceding stay in that subsection (d) hospital included at least 3 days in an ICU, as we define under the ICU criterion; or

- The admission to the LTCH was “immediately preceded” by discharge from a subsection (d) hospital and the claim for the LTCH discharge includes the applicable procedure code that indicates at least 96 hours of ventilator services were provided during the LTCH stay, as we define under the ventilator criterion. Claims data from the FY 2017 MedPAR file that reported ICD-10-PCS procedure code 5A1955Z were used to identify cases involving at least 96 hours of ventilator services in accordance with the ventilator criterion. We note that, for purposes of developing the FY 2019 MS-LTC-DRG relative weights using our current methodology, we did not make any exceptions regarding the identification of cases that would have been excluded from the site neutral payment rate under the statutory provisions that provided for temporary exception from the site neutral payment rate under the LTCH PPS for certain severe wound care discharges from certain LTCHs or for certain spinal cord specialty hospitals provided by sections 15009 and 15010 of Pub. L. 114-255, respectively, had our implementation of that law and the dual rate LTCH PPS payment structure been in effect at the time of the discharge. At this time, it is uncertain how many LTCHs and how many cases in the claims data we used for this final rule meet the criteria to be excluded

from the site neutral payment rate under those exceptions (or would have met the criteria for exclusion had the dual rate LTCH PPS payment structure been in effect at the time of the discharge). Therefore, for the remainder of this section, when we refer to LTCH claims only from cases that meet the criteria for exclusion from the site neutral payment rate (or would have met the criteria had the applicable statutes been in effect at the time of the discharge), such data do not include any discharges that would have been paid based on the LTCH PPS standard Federal payment rate under the provisions of sections 15009 and 15010 of Pub. L. 114-255, had the exception been in effect at the time of the discharge.

Furthermore, consistent with our historical methodology, we excluded any claims in the resulting data set that were submitted by LTCHs that were all-inclusive rate providers and LTCHs that are paid in accordance with demonstration projects authorized under section 402(a) of Pub. L. 90-248 or section 222(a) of Pub. L. 92-603. In addition, consistent with our historical practice and our policies, we excluded any Medicare Advantage (Part C) claims in the resulting data. Such claims were identified based on the presence of a GHO Paid indicator value of “1” in the MedPAR files. The claims that remained after these three trims (that is, the applicable LTCH data) were then used to calculate the proposed MS-LTC-DRG relative weights for FY 2019.

In summary, in general, we identified the claims data used in the development of the FY 2019 MS-LTC-DRG relative weights in this final rule, as we proposed, by trimming claims data that were paid the site neutral payment rate (or would have been paid the site neutral payment rate had the dual payment rate structure been in effect,

except for discharges which would have been excluded from the site neutral payment under the temporary exception for certain severe wound care discharges from certain LTCHs and under the temporary exception for certain spinal cord specialty hospitals), as well as the claims data of 9 all-inclusive rate providers reported in the March 2018 update of the FY 2017 MedPAR file and any Medicare Advantage claims data. (We note that, there were no data from any LTCHs that are paid in accordance with a demonstration project reported in the March 2018 update of the FY 2017 MedPAR file. However, had there been we would trim the claims data from those LTCHs as well, in accordance with our established policy.) As we proposed, we used the remaining data (that is, the applicable LTCH data) to calculate the relative weights for FY 2019.

d. Hospital-Specific Relative Value (HSRV) Methodology

By nature, LTCHs often specialize in certain areas, such as ventilator-dependent patients. Some case types (MS-LTC-DRGs) may be treated, to a large extent, in hospitals that have, from a perspective of charges, relatively high (or low) charges. This nonrandom distribution of cases with relatively high (or low) charges in specific MS-LTC-DRGs has the potential to inappropriately distort the measure of average charges. To account for the fact that cases may not be randomly distributed across LTCHs, consistent with the methodology we have used since the implementation of the LTCH PPS, in this FY 2019 IPPS/LTCH PPS final rule, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20458), we continued to use a hospital-specific relative value (HSRV) methodology to calculate the MS-LTC-DRG relative weights for FY 2019. We believe that this method removes this hospital-specific source of bias in

measuring LTCH average charges (67 FR 55985). Specifically, under this methodology, we reduced the impact of the variation in charges across providers on any particular MS-LTC-DRG relative weight by converting each LTCH's charge for an applicable LTCH case to a relative value based on that LTCH's average charge for such cases.

Under the HSRV methodology, we standardize charges for each LTCH by converting its charges for each applicable LTCH case to hospital-specific relative charge values and then adjusting those values for the LTCH's case-mix. The adjustment for case-mix is needed to rescale the hospital-specific relative charge values (which, by definition, average 1.0 for each LTCH). The average relative weight for an LTCH is its case-mix; therefore, it is reasonable to scale each LTCH's average relative charge value by its case-mix. In this way, each LTCH's relative charge value is adjusted by its case-mix to an average that reflects the complexity of the applicable LTCH cases it treats relative to the complexity of the applicable LTCH cases treated by all other LTCHs (the average LTCH PPS case-mix of all applicable LTCH cases across all LTCHs).

In accordance with our established methodology, for FY 2019, as we proposed, we continued to standardize charges for each applicable LTCH case by first dividing the adjusted charge for the case (adjusted for SSOs under § 412.529 as described in section VII.B.3.g. (Step 3) of the preamble of this final rule) by the average adjusted charge for all applicable LTCH cases at the LTCH in which the case was treated. SSO cases are cases with a length of stay that is less than or equal to five-sixths the average length of stay of the MS-LTC-DRG (§ 412.529 and § 412.503). The average adjusted charge reflects the average intensity of the health care services delivered by a particular LTCH

and the average cost level of that LTCH. The resulting ratio was multiplied by that LTCH's case-mix index to determine the standardized charge for the case.

Multiplying the resulting ratio by the LTCH's case-mix index accounts for the fact that the same relative charges are given greater weight at an LTCH with higher average costs than they would at an LTCH with low average costs, which is needed to adjust each LTCH's relative charge value to reflect its case-mix relative to the average case-mix for all LTCHs. By standardizing charges in this manner, we count charges for a Medicare patient at an LTCH with high average charges as less resource intensive than they would be at an LTCH with low average charges. For example, a \$10,000 charge for a case at an LTCH with an average adjusted charge of \$17,500 reflects a higher level of relative resource use than a \$10,000 charge for a case at an LTCH with the same case-mix, but an average adjusted charge of \$35,000. We believe that the adjusted charge of an individual case more accurately reflects actual resource use for an individual LTCH because the variation in charges due to systematic differences in the markup of charges among LTCHs is taken into account.

e. Treatment of Severity Levels in Developing the MS-LTC-DRG Relative Weights

For purposes of determining the MS-LTC-DRG relative weights, under our historical methodology, there are three different categories of MS-DRGs based on volume of cases within specific MS-LTC-DRGs: (1) MS-LTC-DRGs with at least 25 applicable LTCH cases in the data used to calculate the relative weight, which are each assigned a unique relative weight; (2) low-volume MS-LTC-DRGs (that is, MS-LTC-DRGs that contain between 1 and 24 applicable LTCH cases that are grouped

into quintiles (as described later in this section of the final rule) and assigned the relative weight of the quintile); and (3) no-volume MS-LTC-DRGs that are cross-walked to other MS-LTC-DRGs based on the clinical similarities and assigned the relative weight of the cross-walked MS-LTC-DRG (as described in greater detail below). For FY 2019, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20459), we are continuing to use applicable LTCH cases to establish the same volume-based categories to calculate the FY 2019 MS-LTC-DRG relative weights.

In determining the FY 2019 MS-LTC-DRG relative weights, when necessary, as is our longstanding practice, as we proposed, we made adjustments to account for nonmonotonicity, as discussed in greater detail later in Step 6 of section VII.B.3.g. of the preamble of this final rule. We refer readers to the discussion in the FY 2010 IPPS/RV 2010 LTCH PPS final rule for our rationale for including an adjustment for nonmonotonicity (74 FR 43953 through 43954).

f. Low-Volume MS-LTC-DRGs

In order to account for MS-LTC-DRGs with low-volume (that is, with fewer than 25 applicable LTCH cases), consistent with our existing methodology, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20459), we are continuing to employ the quintile methodology for low-volume MS-LTC-DRGs, such that we group the “low-volume MS-LTC-DRGs” (that is, MS-LTC-DRGs that contain between 1 and 24 applicable LTCH cases into one of five categories (quintiles) based on average charges (67 FR 55984 through 55995; 72 FR 47283 through 47288; and 81 FR 25148).) In cases where the initial assignment of a low-volume MS-LTC-DRG to a quintile results in

nonmonotonicity within a base-DRG, as we proposed, we made adjustments to the resulting low-volume MS-LTC-DRGs to preserve monotonicity, as discussed in detail in section VII.B.3.g. (Step 6) of the preamble of this final rule.

In this final rule, based on the best available data (that is, the March 2018 update of the FY 2017 MedPAR files), we identified 271 MS-LTC-DRGs that contained between 1 and 24 applicable LTCH cases. This list of MS-LTC-DRGs was then divided into 1 of the 5 low-volume quintiles, each containing at least 54 MS-LTC-DRGs ( $271/5 = 54$  with a remainder of 1). We assigned the low-volume MS-LTC-DRGs to specific low-volume quintiles by sorting the low-volume MS-LTC-DRGs in ascending order by average charge in accordance with our established methodology. Based on the data available for this final rule, the number of MS-LTC-DRGs with less than 25 applicable LTCH cases was not evenly divisible by 5 and, therefore, as we proposed, we employed our historical methodology for determining which of the low-volume quintiles would contain the additional low-volume MS-LTC-DRG. Specifically for this final rule, after organizing the MS-LTC-DRGs by ascending order by average charge, we assigned the first 55 (1<sup>st</sup> through 55<sup>th</sup>) of low-volume MS-LTC-DRGs (with the lowest average charge) into Quintile 1. The 54 MS-LTC-DRGs with the highest average charge cases were assigned into Quintile 5. Because the average charge of the 55<sup>th</sup> low-volume MS-LTC-DRG in the sorted list was closer to the average charge of the 54<sup>th</sup> low-volume MS-LTC-DRG (assigned to Quintile 1) than to the average charge of the 56<sup>th</sup> low-volume MS-LTC-DRG (assigned to Quintile 2), we assigned it to Quintile 1 (such that Quintile 1 contains 55 low-volume MS-LTC-DRGs before any adjustments for nonmonotonicity, as

discussed below). This resulted in 4 of the 5 low-volume quintiles containing 54 MS-LTC-DRGs (Quintiles 2, 3, 4, and 5) and 1 low-volume quintile containing 55 MS-LTC-DRGs (Quintile 1). As discussed earlier, for this final rule, as we proposed, we are providing the list of the composition of the low-volume quintiles for MS-LTC-DRGs for FY 2019 (previously displayed in Table 13A, which was in previous fiscal years listed in section VI. of the Addendum to the respective proposed and final rules and available via the Internet on the CMS website) in a supplemental data file for public use posted via the Internet on the CMS website for this final rule at:

<http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html> in order to streamline the information made available to the public that is used in the annual development of Table 11.

In order to determine the FY 2019 relative weights for the low-volume MS-LTC-DRGs, consistent with our historical practice, as we proposed, we used the five low-volume quintiles described previously. We determined a relative weight and (geometric) average length of stay for each of the five low-volume quintiles using the methodology described in section VII.B.3.g. of the preamble of this final rule. We assigned the same relative weight and average length of stay to each of the low-volume MS-LTC-DRGs that make up an individual low-volume quintile. We note that, as this system is dynamic, it is possible that the number and specific type of MS-LTC-DRGs with a low-volume of applicable LTCH cases will vary in the future. Furthermore, we note that we continue to monitor the volume (that is, the number of applicable LTCH cases) in the low-volume quintiles to ensure that our quintile assignments used in

determining the MS-LTC-DRG relative weights result in appropriate payment for LTCH cases grouped to low-volume MS-LTC-DRGs and do not result in an unintended financial incentive for LTCHs to inappropriately admit these types of cases.

g. Steps for Determining the FY 2019 MS-LTC-DRG Relative Weights

In this final rule, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20460), we are continuing to use our current methodology to determine the FY 2019 MS-LTC-DRG relative weights.

In summary, to determine the FY 2019 MS-LTC-DRG relative weights, as we proposed, we grouped applicable LTCH cases to the appropriate MS-LTC-DRG, while taking into account the low-volume quintiles (as described above) and cross-walked no-volume MS-LTC-DRGs (as described later in this section). After establishing the appropriate MS-LTC-DRG (or low-volume quintile), as we proposed, we calculated the FY 2019 relative weights by first removing cases with a length of stay of 7 days or less and statistical outliers (Steps 1 and 2 below). Next, as we proposed, we adjusted the number of applicable LTCH cases in each MS-LTC-DRG (or low-volume quintile) for the effect of SSO cases (Step 3 below). After removing applicable LTCH cases with a length of stay of 7 days or less (Step 1 below) and statistical outliers (Step 2 below), which are the SSO-adjusted applicable LTCH cases and corresponding charges (step 3 below), as we proposed, we calculated “relative adjusted weights” for each MS-LTC-DRG (or low-volume quintile) using the HSRV method.

Step 1--Remove cases with a length of stay of 7 days or less.

The first step in our calculation of the FY 2019 MS-LTC-DRG relative weights is to remove cases with a length of stay of 7 days or less. The MS-LTC-DRG relative weights reflect the average of resources used on representative cases of a specific type. Generally, cases with a length of stay of 7 days or less do not belong in an LTCH because these stays do not fully receive or benefit from treatment that is typical in an LTCH stay, and full resources are often not used in the earlier stages of admission to an LTCH. If we were to include stays of 7 days or less in the computation of the FY 2019 MS-LTC-DRG relative weights, the value of many relative weights would decrease and, therefore, payments would decrease to a level that may no longer be appropriate. We do not believe that it would be appropriate to compromise the integrity of the payment determination for those LTCH cases that actually benefit from and receive a full course of treatment at an LTCH by including data from these very short stays. Therefore, consistent with our existing relative weight methodology, in determining the FY 2019 MS-LTC-DRG relative weights, as we proposed, we removed LTCH cases with a length of stay of 7 days or less from applicable LTCH cases. (For additional information on what is removed in this step of the relative weight methodology, we refer readers to 67 FR 55989 and 74 FR 43959.)

Step 2--Remove statistical outliers.

The next step in our calculation of the FY 2019 MS-LTC-DRG relative weights is to remove statistical outlier cases from the LTCH cases with a length of stay of at least 8 days. Consistent with our existing relative weight methodology, as we proposed, we continued to define statistical outliers as cases that are outside of 3.0 standard deviations

from the mean of the log distribution of both charges per case and the charges per day for each MS-LTC-DRG. These statistical outliers were removed prior to calculating the relative weights because we believe that they may represent aberrations in the data that distort the measure of average resource use. Including those LTCH cases in the calculation of the relative weights could result in an inaccurate relative weight that does not truly reflect relative resource use among those MS-LTC-DRGs. (For additional information on what is removed in this step of the proposed relative weight methodology, we refer readers to 67 FR 55989 and 74 FR 43959.) After removing cases with a length of stay of 7 days or less and statistical outliers, we were left with applicable LTCH cases that have a length of stay greater than or equal to 8 days. In this final rule, we refer to these cases as “trimmed applicable LTCH cases.”

Step 3--Adjust charges for the effects of SSOs.

As the next step in the calculation of the FY 2019 MS-LTC-DRG relative weights, consistent with our historical approach, as we proposed, we adjusted each LTCH's charges per discharge for those remaining cases (that is, trimmed applicable LTCH cases) for the effects of SSOs (as defined in § 412.529(a) in conjunction with § 412.503). Specifically, we made this adjustment by counting an SSO case as a fraction of a discharge based on the ratio of the length of stay of the case to the average length of stay for the MS-LTC-DRG for non-SSO cases. This had the effect of proportionately reducing the impact of the lower charges for the SSO cases in calculating the average charge for the MS-LTC-DRG. This process produced the same result as if the actual

charges per discharge of an SSO case were adjusted to what they would have been had the patient's length of stay been equal to the average length of stay of the MS-LTC-DRG.

Counting SSO cases as full LTCH cases with no adjustment in determining the FY 2019 MS-LTC-DRG relative weights would lower the FY 2019 MS-LTC-DRG relative weight for affected MS-LTC-DRGs because the relatively lower charges of the SSO cases would bring down the average charge for all cases within a MS-LTC-DRG. This would result in an "underpayment" for non-SSO cases and an "overpayment" for SSO cases. Therefore, as we proposed, we continued to adjust for SSO cases under § 412.529 in this manner because it would result in more appropriate payments for all LTCH PPS standard Federal payment rate cases. (For additional information on this step of the relative weight methodology, we refer readers to 67 FR 55989 and 74 FR 43959.)

Step 4--Calculate the FY 2019 MS-LTC-DRG relative weights on an iterative basis.

Consistent with our historical relative weight methodology, as we proposed, we calculated the FY 2019 MS-LTC-DRG relative weights using the HSRV methodology, which is an iterative process. First, for each SSO-adjusted trimmed applicable LTCH case, we calculated a hospital-specific relative charge value by dividing the charge per discharge after adjusting for SSOs of the LTCH case (from Step 3) by the average charge per SSO-adjusted discharge for the LTCH in which the case occurred. The resulting ratio was then multiplied by the LTCH's case-mix index to produce an adjusted hospital-specific relative charge value for the case. We used an initial case-mix index value of 1.0 for each LTCH.

For each MS-LTC-DRG, we calculated the FY 2019 relative weight by dividing the SSO-adjusted average of the hospital-specific relative charge values for applicable LTCH cases for the MS-LTC-DRG (that is, the sum of the hospital-specific relative charge value from above divided by the sum of equivalent cases from Step 3 for each MS-LTC-DRG) by the overall SSO-adjusted average hospital-specific relative charge value across all applicable LTCH cases for all LTCHs (that is, the sum of the hospital-specific relative charge value from above divided by the sum of equivalent applicable LTCH cases from Step 3 for each MS-LTC-DRG). Using these recalculated MS-LTC-DRG relative weights, each LTCH's average relative weight for all of its SSO-adjusted trimmed applicable LTCH cases (that is, its case-mix) was calculated by dividing the sum of all the LTCH's MS-LTC-DRG relative weights by its total number of SSO-adjusted trimmed applicable LTCH cases. The LTCHs' hospital-specific relative charge values (from previous) were then multiplied by the hospital-specific case-mix indexes. The hospital-specific case-mix adjusted relative charge values were then used to calculate a new set of MS-LTC-DRG relative weights across all LTCHs. This iterative process continued until there was convergence between the relative weights produced at adjacent steps, for example, when the maximum difference was less than 0.0001.

Step 5--Determine a FY 2019 relative weight for MS-LTC-DRGs with no applicable LTCH cases.

Using the trimmed applicable LTCH cases, consistent with our historical methodology, we identified the MS-LTC-DRGs for which there were no claims in the March 2018 update of the FY 2017 MedPAR file and, therefore, for which no charge data

was available for these MS-LTC-DRGs. Because patients with a number of the diagnoses under these MS-LTC-DRGs may be treated at LTCHs, consistent with our historical methodology, we generally assign a relative weight to each of the no-volume MS-LTC-DRGs based on clinical similarity and relative costliness (with the exception of “transplant” MS-LTC-DRGs, “error” MS-LTC-DRGs, and MS-LTC-DRGs that indicate a principal diagnosis related to a psychiatric diagnosis or rehabilitation (referred to as the “psychiatric or rehabilitation” MS-LTC-DRGs), as discussed later in this section of this final rule). (For additional information on this step of the relative weight methodology, we refer readers to 67 FR 55991 and 74 FR 43959 through 43960.)

As we proposed, we cross-walked each no-volume MS-LTC-DRG to another MS-LTC-DRG for which we calculated a relative weight (determined in accordance with the methodology described above). Then, the “no-volume” MS-LTC-DRG was assigned the same relative weight (and average length of stay) of the MS-LTC-DRG to which it was cross-walked (as described in greater detail in this section of this final rule).

Of the 761 MS-LTC-DRGs for FY 2019, we identified 346 MS-LTC-DRGs for which there were no trimmed applicable LTCH cases (the number identified includes the 8 “transplant” MS-LTC-DRGs, the 2 “error” MS-LTC-DRGs, and the 15 “psychiatric or rehabilitation” MS-LTC-DRGs, which are discussed below). As we proposed, we assigned relative weights to each of the 346 no-volume MS-LTC-DRGs that contained trimmed applicable LTCH cases based on clinical similarity and relative costliness to 1 of the remaining 415 ( $761 - 346 = 415$ ) MS-LTC-DRGs for which we calculated relative weights based on the trimmed applicable LTCH cases in the FY 2017 MedPAR file data

using the steps described previously. (For the remainder of this discussion, we refer to the “cross-walked” MS-LTC-DRGs as the MS-LTC-DRGs to which we cross-walked 1 of the 346 “no volume” MS-LTC-DRGs.) Then, as we generally proposed, we assigned the 346 no-volume MS-LTC-DRGs the relative weight of the cross-walked MS-LTC-DRG. (As explained below in Step 6, when necessary, we made adjustments to account for nonmonotonicity.)

We cross-walked the no-volume MS-LTC-DRG to a MS-LTC-DRG for which we calculated relative weights based on the March 2018 update of the FY 2017 MedPAR file, and to which it is similar clinically in intensity of use of resources and relative costliness as determined by criteria such as care provided during the period of time surrounding surgery, surgical approach (if applicable), length of time of surgical procedure, postoperative care, and length of stay. (For more details on our process for evaluating relative costliness, we refer readers to the FY 2010 IPPS/RV 2010 LTCH PPS final rule (73 FR 48543).) We believe in the rare event that there would be a few LTCH cases grouped to one of the no-volume MS-LTC-DRGs in FY 2018, the relative weights assigned based on the cross-walked MS-LTC-DRGs would result in an appropriate LTCH PPS payment because the crosswalks, which are based on clinical similarity and relative costliness, would be expected to generally require equivalent relative resource use.

We then assigned the relative weight of the cross-walked MS-LTC-DRG as the relative weight for the no-volume MS-LTC-DRG such that both of these MS-LTC-DRGs (that is, the no-volume MS-LTC-DRG and the cross-walked MS-LTC-DRG) have the

same relative weight (and average length of stay) for FY 2019. We note that, if the cross-walked MS-LTC-DRG had 25 applicable LTCH cases or more, its relative weight (calculated using the methodology described in Steps 1 through 4 above) was assigned to the no-volume MS-LTC-DRG as well. Similarly, if the MS-LTC-DRG to which the no-volume MS-LTC-DRG was cross-walked had 24 or less cases and, therefore, was designated to 1 of the low-volume quintiles for purposes of determining the relative weights, we assigned the relative weight of the applicable low-volume quintile to the no-volume MS-LTC-DRG such that both of these MS-LTC-DRGs (that is, the no-volume MS-LTC-DRG and the cross-walked MS-LTC-DRG) have the same relative weight for FY 2019. (As we noted previously, in the infrequent case where nonmonotonicity involving a no-volume MS-LTC-DRG resulted, additional adjustments as described in Step 6 were required in order to maintain monotonically increasing relative weights.)

As discussed earlier, for this final rule, as we proposed, we are providing the list of the no-volume MS-LTC-DRGs and the MS-LTC-DRGs to which each was cross-walked (that is, the cross-walked MS-LTC-DRGs) for FY 2019 (previously displayed in Table 13B, which was in previous fiscal years listed in section VI. of the Addendum to the respective proposed and final rules and available via the Internet on the CMS website) in a supplemental data file for public use posted via the Internet on the CMS website for this final rule at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html> in order to streamline the information made available to the public that is used in the annual development of Table 11.

To illustrate this methodology for determining the relative weights for the FY 2019 MS-LTC-DRGs with no applicable LTCH cases, we are providing the following example, which refers to the no-volume MS-LTC-DRGs crosswalk information for FY 2019 (which, as previously stated, we are providing in a supplemental data file posted via the Internet on the CMS website for this final rule).

Example: There were no trimmed applicable LTCH cases in the FY 2017 MedPAR file that we used for this final rule for MS-LTC-DRG 061 (Acute Ischemic Stroke with Use of Thrombolytic Agent with MCC). We determined that MS-LTC-DRG 070 (Nonspecific Cerebrovascular Disorders with MCC) is similar clinically and based on resource use to MS-LTC-DRG 061. Therefore, we assigned the same relative weight (and average length of stay) of MS-LTC-DRG 70 of 0.8822 for FY 2019 to MS-LTC-DRG 061 (we refer readers to Table 11, which is listed in section VI. of the Addendum to this final rule and is available via the Internet on the CMS website).

Again, we note that, as this system is dynamic, it is entirely possible that the number of MS-LTC-DRGs with no volume will vary in the future. Consistent with our historical practice, we used the most recent available claims data to identify the trimmed applicable LTCH cases from which we determined the relative weights in this final rule.

For FY 2019, consistent with our historical relative weight methodology, as we proposed, we established a relative weight of 0.0000 for the following transplant MS-LTC-DRGs: Heart Transplant or Implant of Heart Assist System with MCC (MS-LTC-DRG 001); Heart Transplant or Implant of Heart Assist System without MCC (MS-LTC-DRG 002); Liver Transplant with MCC or Intestinal Transplant

(MS-LTC-DRG 005); Liver Transplant without MCC (MS-LTC-DRG 006); Lung Transplant (MS-LTC-DRG 007); Simultaneous Pancreas/Kidney Transplant (MS-LTC-DRG 008); Pancreas Transplant (MS-LTC-DRG 010); and Kidney Transplant (MS-LTC-DRG 652). This is because Medicare only covers these procedures if they are performed at a hospital that has been certified for the specific procedures by Medicare and presently no LTCH has been so certified. At the present time, we include these eight transplant MS-LTC-DRGs in the GROUPER program for administrative purposes only. Because we use the same GROUPER program for LTCHs as is used under the IPPS, removing these MS-LTC-DRGs would be administratively burdensome. (For additional information regarding our treatment of transplant MS-LTC-DRGs, we refer readers to the RY 2010 LTCH PPS final rule (74 FR 43964).) In addition, consistent with our historical policy, as we proposed, we established a relative weight of 0.0000 for the 2 “error” MS-LTC-DRGs (that is, MS-LTC-DRG 998 (Principal Diagnosis Invalid as Discharge Diagnosis) and MS-LTC-DRG 999 (Ungroupable)) because applicable LTCH cases grouped to these MS-LTC-DRGs cannot be properly assigned to an MS-LTC-DRG according to the grouping logic.

As discussed in section VII.C. of the preamble of this final rule, section 51005 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123) extended the transitional blended payment rate for site neutral payment rate cases for an additional 2 years (that is, discharges occurring in cost reporting periods beginning in FYs 2018 and 2019 will continue to be paid under the blended payment rate). Therefore, in this final rule, consistent with our practice in FYs 2016 through 2018, as we proposed, we established a

relative weight for FY 2019 equal to the respective FY 2015 relative weight of the MS-LTC-DRGs for the following “psychiatric or rehabilitation” MS-LTC-DRGs: MS-LTC-DRG 876 (O.R. Procedure with Principal Diagnoses of Mental Illness); MS-LTC-DRG 880 (Acute Adjustment Reaction & Psychosocial Dysfunction); MS-LTC-DRG 881 (Depressive Neuroses); MS-LTC-DRG 882 (Neuroses Except Depressive); MS-LTC-DRG 883 (Disorders of Personality & Impulse Control); MS-LTC-DRG 884 (Organic Disturbances & Mental Retardation); MS-LTC-DRG 885 (Psychoses); MS-LTC-DRG 886 (Behavioral & Developmental Disorders); MS-LTC-DRG 887 (Other Mental Disorder Diagnoses); MS-LTC-DRG 894 (Alcohol/Drug Abuse or Dependence, Left Ama); MS-LTC-DRG 895 (Alcohol/Drug Abuse or Dependence, with Rehabilitation Therapy); MS-LTC-DRG 896 (Alcohol/Drug Abuse or Dependence, without Rehabilitation Therapy with MCC); MS-LTC-DRG 897 (Alcohol/Drug Abuse or Dependence, without Rehabilitation Therapy without MCC); MS-LTC-DRG 945 (Rehabilitation with CC/MCC); and MS-LTC-DRG 946 (Rehabilitation without CC/MCC). As we discussed when we implemented the dual rate LTCH PPS payment structure, LTCH discharges that are grouped to these 15 “psychiatric and rehabilitation” MS-LTC-DRGs do not meet the criteria for exclusion from the site neutral payment rate. As such, under the criterion for a principal diagnosis relating to a psychiatric diagnosis or to rehabilitation, there are no applicable LTCH cases to use in calculating a relative weight for the “psychiatric and rehabilitation” MS-LTC-DRGs. In other words, any LTCH PPS discharges grouped to any of the 15 “psychiatric and rehabilitation” MS-LTC-DRGs would always be paid at the site neutral payment rate, and, therefore,

those MS-LTC-DRGs would never include any LTCH cases that meet the criteria for exclusion from the site neutral payment rate. However, section 1886(m)(6)(B) of the Act establishes a transitional payment method for cases that would be paid at the site neutral payment rate for LTCH discharges occurring in cost reporting periods beginning during FY 2016 or FY 2017, which was extended to include FYs 2018 and 2019 under Pub. L. 115-123. (We refer readers to section VII.C. of the preamble of this final rule for a detailed discussion of the extension of the transitional blended payment method provisions under Pub. L. 115-123 and our policies for FY 2019. Under the transitional payment method for site neutral payment rate cases, for LTCH discharges occurring in cost reporting periods beginning on or after October 1, 2018, and on or before September 30, 2019, site neutral payment rate cases are paid a blended payment rate, calculated as 50 percent of the applicable site neutral payment rate amount for the discharge and 50 percent of the applicable LTCH PPS standard Federal payment rate. Because the LTCH PPS standard Federal payment rate is based on the relative weight of the MS-LTC-DRG, in order to determine the transitional blended payment for site neutral payment rate cases grouped to one of the “psychiatric or rehabilitation” MS-LTC-DRGs in FY 2019, we assigned a relative weight to these MS-LTC-DRGs for FY 2019 that is the same as the FY 2018 relative weight (which is also the same as the FYs 2016 and 2017 relative weight). We believe that using the respective FY 2015 relative weight for each of the “psychiatric or rehabilitation” MS-LTC-DRGs results in appropriate payments for LTCH cases that are paid at the site neutral payment rate under the transition policy provided by the statute because there are no clinically similar

MS-LTC-DRGs for which we were able to determine relative weights based on applicable LTCH cases in the March 2018 update of the FY 2017 MedPAR file data using the steps described above. Furthermore, we believe that it would be administratively burdensome and introduce unnecessary complexity to the MS-LTC-DRG relative weight calculation to use the LTCH discharges in the MedPAR file data to calculate a relative weight for those 15 “psychiatric and rehabilitation” MS-LTC-DRGs to be used for the sole purposes of determining half of the transitional blended payment for site neutral payment rate cases during the transition period (80 FR 49631 through 49632) or payment for discharges from spinal cord specialty hospitals under § 412.522 (b)(4).

In summary, for FY 2019, we established a relative weight (and average length of stay thresholds) equal to the respective FY 2015 relative weight of the MS-LTC-DRGs for the 15 “psychiatric or rehabilitation” MS-LTC-DRGs listed previously (that is, MS-LTC-DRGs 876, 880, 881, 882, 883, 884, 885, 886, 887, 894, 895, 896, 897, 945, and 946). Table 11, which is listed in section VI. of the Addendum to this final rule and is available via the Internet on the CMS website, reflects this policy.

Step 6--Adjust the FY 2019 MS-LTC-DRG relative weights to account for nonmonotonically increasing relative weights.

The MS-DRGs contain base DRGs that have been subdivided into one, two, or three severity of illness levels. Where there are three severity levels, the most severe level has at least one secondary diagnosis code that is referred to as an MCC (that is, major complication or comorbidity). The next lower severity level contains cases with at

least one secondary diagnosis code that is a CC (that is, complication or comorbidity).

Those cases without an MCC or a CC are referred to as “without CC/MCC.” When data do not support the creation of three severity levels, the base MS-DRG is subdivided into either two levels or the base MS-DRG is not subdivided. The two-level subdivisions may consist of the MS-DRG with CC/MCC and the MS-DRG without CC/MCC.

Alternatively, the other type of two-level subdivision may consist of the MS-DRG with MCC and the MS-DRG without MCC.

In those base MS-LTC-DRGs that are split into either two or three severity levels, cases classified into the “without CC/MCC” MS-LTC-DRG are expected to have a lower resource use (and lower costs) than the “with CC/MCC” MS-LTC-DRG (in the case of a two-level split) or both the “with CC” and the “with MCC” MS-LTC-DRGs (in the case of a three-level split). That is, theoretically, cases that are more severe typically require greater expenditure of medical care resources and would result in higher average charges. Therefore, in the three severity levels, relative weights should increase by severity, from lowest to highest. If the relative weights decrease as severity increases (that is, if within a base MS-LTC-DRG, an MS-LTC-DRG with CC has a higher relative weight than one with MCC, or the MS-LTC-DRG “without CC/MCC” has a higher relative weight than either of the others), they are nonmonotonic. We continue to believe that utilizing nonmonotonic relative weights to adjust Medicare payments would result in inappropriate payments because the payment for the cases in the higher severity level in a base MS-LTC-DRG (which are generally expected to have higher resource use and costs) would be lower than the payment for cases in a lower severity level within the same base

MS-LTC-DRG (which are generally expected to have lower resource use and costs). Therefore, in determining the FY 2019 MS-LTC-DRG relative weights, consistent with our historical methodology, as we proposed, we continued to combine MS-LTC-DRG severity levels within a base MS-LTC-DRG for the purpose of computing a relative weight when necessary to ensure that monotonicity is maintained. For a comprehensive description of our existing methodology to adjust for nonmonotonicity, we refer readers to the FY 2010 IPPS/R Y 2010 LTCH PPS final rule (74 FR 43964 through 43966). Any adjustments for nonmonotonicity that were made in determining the FY 2019 MS-LTC-DRG relative weights in this final rule by applying this methodology are denoted in Table 11, which is listed in section VI. of the Addendum to this final rule and is available via the Internet on the CMS website.

Step 7-- Calculate the FY 2019 MS-LTC-DRG reclassification and recalibration budget neutrality factor.

In accordance with the regulations at § 412.517(b) (in conjunction with § 412.503), the annual update to the MS-LTC-DRG classifications and relative weights is done in a budget neutral manner such that estimated aggregate LTCH PPS payments would be unaffected, that is, would be neither greater than nor less than the estimated aggregate LTCH PPS payments that would have been made without the MS-LTC-DRG classification and relative weight changes. (For a detailed discussion on the establishment of the budget neutrality requirement for the annual update of the MS-LTC-DRG classifications and relative weights, we refer readers to the RY 2008 LTCH PPS final rule (72 FR 26881 and 26882).)

The MS-LTC-DRG classifications and relative weights are updated annually based on the most recent available LTCH claims data to reflect changes in relative LTCH resource use (§ 412.517(a) in conjunction with § 412.503). To achieve the budget neutrality requirement at § 412.517(b), under our established methodology, for each annual update, the MS-LTC-DRG relative weights are uniformly adjusted to ensure that estimated aggregate payments under the LTCH PPS would not be affected (that is, decreased or increased). Consistent with that provision, as we proposed, we updated the MS-LTC-DRG classifications and relative weights for FY 2019 based on the most recent available LTCH data for applicable LTCH cases, and continued to apply a budget neutrality adjustment in determining the FY 2019 MS-LTC-DRG relative weights.

In this FY 2019 IPPS/LTCH PPS final rule, to ensure budget neutrality in the update to the MS-LTC-DRG classifications and relative weights under § 412.517(b), as we proposed, we continued to use our established two-step budget neutrality methodology.

To calculate the normalization factor for FY 2019, we grouped applicable LTCH cases using the FY 2019 Version 36 GROUPER, and the recalibrated FY 2019 MS-LTC-DRG relative weights to calculate the average case-mix index (CMI); we grouped the same applicable LTCH cases using the FY 2018 GROUPER Version 35 and MS-LTC-DRG relative weights and calculated the average CMI; and computed the ratio by dividing the average CMI for FY 2018 by the average CMI for FY 2019. That ratio is the normalization factor. Because the calculation of the normalization factor involves the relative weights for the MS-LTC-DRGs that contained applicable LTCH cases to

calculate the average CMIs, any low-volume MS-LTC-DRGs are included in the calculation (and the MS-LTC-DRGs with no applicable LTCH cases are not included in the calculation).

To calculate the budget neutrality adjustment factor, we simulated estimated total FY 2019 LTCH PPS standard Federal payment rate payments for applicable LTCH cases using the FY 2019 normalized relative weights and GROUPER Version 36; simulated estimated total FY 2018 LTCH PPS standard Federal payment rate payments for applicable LTCH cases using the FY 2018 MS-LTC-DRG relative weights and the FY 2018 GROUPER Version 35; and calculated the ratio of these estimated total payments by dividing the simulated estimated total LTCH PPS standard Federal payment rate payments for FY 2018 by the simulated estimated total LTCH PPS standard Federal payment rate payments for FY 2019. The resulting ratio is the budget neutrality adjustment factor. The calculation of the budget neutrality factor involves the relative weights for the LTCH cases used in the payment simulation, which includes any cases grouped to low-volume MS-LTC-DRGs or to MS-LTC-DRGs with no applicable LTCH cases, and generally does not include payments for cases grouped to a MS-LTC-DRG with no applicable LTCH cases. (Occasionally, a few LTCH cases (that is, those with a covered length of stay of 7 days or less, which are removed from the relative weight calculation in step (2) that are grouped to a MS-LTC-DRG with no applicable LTCH cases are included in the payment simulations used to calculate the budget neutrality factor. However, the number and payment amount of such cases have a negligible impact on the budget neutrality factor calculation).

In this final rule, to ensure budget neutrality in the update to the MS-LTC-DRG classifications and relative weights under § 412.517(b), as we proposed, we continued to use our established two-step budget neutrality methodology. Therefore, in this final rule, in the first step of our MS-LTC-DRG budget neutrality methodology, for FY 2019, as we proposed, we calculated and applied a normalization factor to the recalibrated relative weights (the result of Steps 1 through 6 discussed previously) to ensure that estimated payments are not affected by changes in the composition of case types or the changes to the classification system. That is, the normalization adjustment is intended to ensure that the recalibration of the MS-LTC-DRG relative weights (that is, the process itself) neither increases nor decreases the average case-mix index.

To calculate the normalization factor for FY 2019 (the first step of our budget neutrality methodology), we used the following three steps: (1.a.) used the most recent available applicable LTCH cases from the most recent available data (that is, LTCH discharges from the FY 2017 MedPAR file) and grouped them using the FY 2019 GROUPER (that is, Version 36 for FY 2019) and the recalibrated FY 2019 MS-LTC-DRG relative weights (determined in Steps 1 through 6 above) to calculate the average case-mix index; (1.b.) grouped the same applicable LTCH cases (as are used in Step 1.a.) using the FY 2018 GROUPER (Version 35) and FY 2018 MS-LTC-DRG relative weights and calculated the average case-mix index; and (1.c.) computed the ratio of these average case-mix indexes by dividing the average CMI for FY 2018 (determined in Step 1.b.) by the average case-mix index for FY 2019 (determined in Step 1.a.). As a result, in determining the MS-LTC-DRG relative weights for FY 2019, each recalibrated

MS-LTC-DRG relative weight was multiplied by the normalization factor of 1.275254 (determined in Step 1.c.) in the first step of the budget neutrality methodology, which produced “normalized relative weights.”

In the second step of our MS-LTC-DRG budget neutrality methodology, we calculated a second budget neutrality factor consisting of the ratio of estimated aggregate FY 2019 LTCH PPS standard Federal payment rate payments for applicable LTCH cases (the sum of all calculations under Step 1.a. mentioned previously) after reclassification and recalibration to estimated aggregate payments for FY 2019 LTCH PPS standard Federal payment rate payments for applicable LTCH cases before reclassification and recalibration (that is, the sum of all calculations under Step 1.b. mentioned previously).

That is, for this final rule, for FY 2019, under the second step of the budget neutrality methodology, as we proposed, we determined the budget neutrality adjustment factor using the following three steps: (2.a.) simulated estimated total FY 2018 LTCH PPS standard Federal payment rate payments for applicable LTCH cases using the normalized relative weights for FY 2019 and GROUPER Version 35 (as described above); (2.b.) simulated estimated total FY 2018 LTCH PPS standard Federal payment rate payments for applicable LTCH cases using the FY 2018 GROUPER (Version 35) and the FY 2018 MS-LTC-DRG relative weights in Table 11 of the FY 2018 IPPS/LTCH PPS final rule available on the Internet, as described in section VI. of the Addendum of that final rule; and (2.c.) calculated the ratio of these estimated total payments by dividing the value determined in Step 2.b. by the value determined in Step 2.a. In determining the FY 2019 MS-LTC-DRG relative weights, each normalized relative weight was then

multiplied by a budget neutrality factor of 0.9931052 (the value determined in Step 2.c.) in the second step of the budget neutrality methodology to achieve the budget neutrality requirement at § 412.517(b).

Accordingly, in determining the FY 2019 MS-LTC-DRG relative weights in this final rule, consistent with our existing methodology, as we proposed, we applied a normalization factor of 1.275254 and a budget neutrality factor of 0.9931052. Table 11, which is listed in section VI. of the Addendum to this final rule and is available via the Internet on the CMS website, lists the MS-LTC-DRGs and their respective relative weights, geometric mean length of stay, and five-sixths of the geometric mean length of stay (used to identify SSO cases under § 412.529(a)) for FY 2019.

#### C. Modifications to the Application of the Site Neutral Payment Rate (§ 412.522)

Section 1206 of Pathway for SGR Reform Act (Pub. L. 113–67) mandated the new dual rate payment system under the LTCH PPS beginning with LTCH discharges occurring in cost reporting periods beginning on or after October 1, 2015. In addition, the statute established a transitional blended payment method for cases that would be paid the site neutral payment rate for LTCH discharges occurring in cost reporting periods beginning during FY 2016 or FY 2017. For those discharges, the applicable site neutral payment rate is the transitional blended payment rate specified in section 1886(m)(6)(B)(iii) of the Act. Section 1886(m)(6)(B)(iii) of the Act specifies that the transitional blended payment rate is comprised of 50 percent of the site neutral payment rate for the discharge under section 1886(m)(6)(B)(ii) of the Act and 50 percent of the

LTCH PPS standard Federal payment rate that would have applied to the discharge if paragraph (6) of section 1886(m) of the Act had not been enacted.

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49610 through 49612), we specified under § 412.522(c)(3), for LTCH discharges occurring in cost reporting periods beginning on or after October 1, 2015, and on or before September 30, 2017 (that is, discharges occurring in cost reporting periods beginning during FYs 2016 and 2017), that the payment amount for site neutral payment rate cases is a blended payment rate, which is calculated as 50 percent of the applicable site neutral payment rate amount for the discharge as determined under § 412.522(c)(1) and 50 percent of the applicable LTCH PPS standard Federal payment rate determined under § 412.523. In addition, we established that the payment amounts determined under § 412.522(c)(1) (the site neutral payment rate) and under § 412.523 (the LTCH PPS standard Federal rate) include any applicable adjustments, such as HCO payments, as applicable.

Section 51005 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123) extended the transitional blended payment rate period for site neutral payment rate cases for 2 years, and provided for an adjustment to the payment for discharges paid under the site neutral payment rate through FY 2026. Specifically, section 51005(a) of Pub. L. 115-123 amended section 1886(m)(6)(B)(i) of the Act to extend the transitional blended payment rate for site neutral payment rate cases for an additional 2 years; that is, discharges occurring in cost reporting periods beginning in FYs 2018 and 2019 will continue to be paid under the blended payment rate. To codify the provisions of section 51005(a) of Pub. L. 115-123, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20464 through

20465), we proposed to revise our regulations at § 412.522(c)(3) to reflect the extension of the transitional blended payment rate period for discharges paid at the site neutral payment rate to include discharges occurring in cost reporting periods beginning on or before September 30, 2019.

In addition, as initially enacted, section 1886(m)(6)(B)(iii) of the Act specified that, for LTCH discharges occurring in cost reporting periods beginning during FY 2018 or later, the applicable site neutral payment rate would be the site neutral payment rate as defined in section 1886(m)(6)(B)(ii) of the Act. Section 51005(b) of Pub. L. 115-123 amended section 1886(m)(6)(B) by adding new clause (iv), which specifies that the IPPS comparable amount defined at section 1886(m)(6)(B)(ii)(I) shall be reduced by 4.6 percent for FYs 2018 through 2026. In order to implement section 51005(b) of Pub. L. 115-123, in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed to revise § 412.522(c)(1) by adding new paragraph (iii) to specify that, for discharges occurring in FYs 2018 through 2026, the amount payable under § 412.522(c)(1)(i) (that is, the IPPS comparable amount) will be reduced by 4.6 percent.

We also proposed to make a conforming amendment to § 412.500, which specifies the basis and scope of subpart O of 42 CFR Part 412, by adding paragraph (a)(9) to reflect the provisions of section 51005 of the Bipartisan Budget Act of 2018.

Comment: Several commenters supported CMS' proposed codification of section 51005 of Pub. L. 115-123. However, several commenters stated that the 4.6 percent reduction to the site neutral payment rate mandated under section 51005(b) of Pub. L. 115-123 should begin with discharges occurring based on the beginning date of a

hospital's cost reporting period rather than the Federal fiscal year. Specifically, these commenters believed that because the transitional blended payment was initially based on discharges occurring during a hospital's cost reporting period, the 4.6 percent payment reduction specified under added section 1886(m)(6)(B)(iv) of the Act should also be applied on this basis. Some commenters stated that applying the 4.6 percent payment reduction based on the Federal fiscal year is inconsistent with CMS' previous implementation of other statutes. Other commenters stated that applying the 4.6 percent payment reduction on a Federal fiscal year basis is inconsistent with the surrounding provisions of Pub. L. 115-123. Some commenters expressed concern regarding the brevity of CMS' proposal and the use of subregulatory guidance in implementing the statute, and urged CMS to examine the "legislative intent" behind the provision of section 51005(b) of Pub. L. 115-123. Other commenters requested that CMS delay implementation of the application of the 4.6 percent payment reduction specified under section 1886(m)(6)(B)(iv) of the Act, as added by section 51005(b) of Pub. L. 115-123, until FY 2020.

Response: We appreciate commenters' support for our proposals to implement and codify the provisions of section 51005 of Pub. L. 115-123, which added section 1886(m)(6)(B)(iv) of the Act. With regard to those commenters who questioned our application of the provision of section 51005(b), we believe that the statutory language of section 51005(b) is clear: the 4.6 percent payment reduction is to occur for discharges in each of Federal fiscal years 2018 through 2026 without reference to cost reporting periods. The transitional blended payment provision under section 51005(a), on the other

hand, specifically states that the payments are to be made based on discharges in the individual hospital's cost reporting period beginning in a particular fiscal year. Given the clear statutory direction and the explicit difference between the language used in the different provisions of the statute, we do not believe that we have the authority to implement the reduction in payments specified under section 1886(m)(6)(B)(iv) of the Act, as added by section 51005(b) of Pub. L. 115-123, other than on a Federal fiscal year basis.

With regard to the commenters' concern regarding the brevity of our proposal, we believe that the provisions of section 51005 of Pub. L. 115-123 are clear and self-implementing, and merely require updating the regulations to be consistent with the statutory directive. Therefore, because of the clear, unambiguous statutory directive in the statute, we used subregulatory guidance to implement the provision of section 51005(b) of Pub. L. 115-123. The statutory language of section 51005 (b) states that the amendments to Act applies for each of Federal fiscal years 2018 through 2026, and does not contain any reference to cost reporting periods. We believe that the "legislative intent" is defined by use of the language in the statute, which is clear and unambiguous.

With respect to the commenters' request that we delay implementation of the application of the 4.6 percent payment reduction until FY 2020, we note that the statute specifically directs us to apply the payment reduction beginning in FY 2018. Therefore, we believe that we lack the authority to delay beginning the application of the 4.6 percent payment reduction after FY 2018, again due to the explicit, unambiguous statutory direction.

We agree with the commenters that the application of the 4.6 percent payment reduction on a Federal fiscal year basis is not based on the same language as surrounding areas of the statute. However, we believe that this fact supports our interpretation and implementation manner. That is, the plain language of surrounding statutory provisions explicitly bases payment provisions on a hospital's cost reporting period, while the plain language of section 51005(b) of Pub. L. 115-123 expressly fails to do so with regard to the 4.6 percent payment reduction. Given this obvious difference, we believe that it is clear the 4.6 percent payment reduction specified under section 1886(m)(6)(B)(iv) of the Act, as added by section 51005(b) of Pub. L. 115-123, is to be applied on a Federal fiscal year basis.

In response to the commenters' opinion that CMS' application of the 4.6 percent payment reduction on a Federal fiscal year basis is inconsistent with the way in which CMS has interpreted and implemented certain other statutes, we believe that these perceived inconsistencies are sufficiently distinguishable due to the statutory language of the provisions of section 51005 of Pub. L. 115-123 and section 1886(m)(6)(B) of the Act. For example, some commenters cited CMS' implementation of the uncompensated care payments under section 1886(r)(2) of the Act, which the commenters stated are made on the basis of a hospital's cost reporting period. In general, under our uncompensated care payment methodology, an eligible hospital's uncompensated care payment for a Federal fiscal year is determined annually in the IPPS/LTCH PPS rulemaking. For a hospital with a cost reporting period that coincides with the Federal fiscal year, its uncompensated care payment for that cost reporting period is its uncompensated care payment for that

Federal fiscal year. (Interim uncompensated care payments, which are made on a per-claim basis during the Federal fiscal year, are reconciled as needed as part of the standard cost report settlement process.) For a hospital with a cost reporting period that spans 2 Federal fiscal years, its uncompensated care payment for the cost reporting period is based on a pro rata ratio of the proportion of the cost reporting period that occurred in each applicable Federal fiscal year (78 FR 61193). While the reconciliation of interim uncompensated care payments may operationally occur based on a hospital's cost reporting period, the hospital's final uncompensated care payment is, nevertheless, a payment amount determined for each Federal fiscal year (not each cost reporting period), and, as applicable, paid proportionally when a hospital's cost reporting period spans the Federal fiscal year. Another purported example of inconsistent interpretation and manner of implementation cited by commenters is CMS' implementation of various moratoria on the establishment of LTCHs. However, we are not persuaded by this comparison because those statutory provisions required interpretation to implement. The provision of section 51005(b) of Pub. L. 115-123 is distinguishable in this respect. There is no impediment to implementing the 4.6 percent payment reduction exactly as written and, given the explicit statutory direction, we do not believe that we have any authority to superimpose regulatory interpretation to clear statutory direction.

After consideration of the public comments we received, we are finalizing, as proposed, the codification of the provision of section 51005(b) of Pub. L. 115-123 in regulations. Specifically, we are: (1) revising § 412.522(c)(3) to extend the transitional blended payment for site neutral payment rate cases to include discharges occurring in

cost reporting periods beginning on or before September 30, 2019; (2) under § 412.522(c)(1), providing for the application of a 4.6 percent payment reduction to the IPPS comparable amount for discharges occurring in FYs 2018 through 2026; and making a conforming amendment to § 412.500, which specifies the basis and scope of subpart O of 42 CFR Part 412, by adding paragraph (a)(9) to reflect the provisions of section 51005 of the Bipartisan Budget Act of 2018.

We note that we received several public comments that addressed issues related to site neutral payment rate payments that were outside the scope of the provisions of the proposed rule. Therefore, we are not responding to those comments in this final rule. We will take these public comments into consideration, as feasible, in future rulemaking.

D. Changes to the LTCH PPS Payment Rates and Other Changes to the LTCH PPS for FY 2019

1. Overview of Development of the LTCH PPS Standard Federal Payment Rates

The basic methodology for determining LTCH PPS standard Federal payment rates is currently set forth at 42 CFR 412.515 through 412.538. In this section, we discuss the factors that we used to update the LTCH PPS standard Federal payment rate for FY 2019, that is, effective for LTCH discharges occurring on or after October 1, 2018 through September 30, 2019. Under the dual rate LTCH PPS payment structure required by statute, beginning with discharges in cost reporting periods beginning in FY 2016, only LTCH discharges that meet the criteria for exclusion from the site neutral payment rate are paid based on the LTCH PPS standard Federal payment rate specified at § 412.523. (For additional details on our finalized policies related to the dual rate LTCH PPS payment structure required by statute, we refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49601 through 49623).)

Prior to the implementation of the dual payment rate system in FY 2016, all LTCHs were paid similarly to those now exempt from the site neutral payment rate. That legacy payment rate was called the standard Federal rate. For details on the development of the initial standard Federal rate for FY 2003, we refer readers to the August 30, 2002 LTCH PPS final rule (67 FR 56027 through 56037). For subsequent updates to the standard Federal rate (FYs 2003 through 2015)/LTCH PPS standard Federal payment rate (FY 2016 through present) as implemented under § 412.523(c)(3), we refer readers to the following final rules: RY 2004 LTCH PPS final rule (68 FR 34134 through 34140);

RY 2005 LTCH PPS final rule (68 FR 25682 through 25684); RY 2006 LTCH PPS final rule (70 FR 24179 through 24180); RY 2007 LTCH PPS final rule (71 FR 27819 through 27827); RY 2008 LTCH PPS final rule (72 FR 26870 through 27029); RY 2009 LTCH PPS final rule (73 FR 26800 through 26804); FY 2010 IPPS/RY 2010 LTCH PPS final rule (74 FR 44021 through 44030); FY 2011 IPPS/LTCH PPS final rule (75 FR 50443 through 50444); FY 2012 IPPS/LTCH PPS final rule (76 FR 51769 through 51773); FY 2013 IPPS/LTCH PPS final rule (77 FR 53479 through 53481); FY 2014 IPPS/LTCH PPS final rule (78 FR 50760 through 50765); FY 2015 IPPS/LTCH PPS final rule (79 FR 50176 through 50180); FY 2016 IPPS/LTCH PPS final rule (80 FR 49634 through 49637); FY 2017 IPPS/LTCH PPS final rule (81 FR 57296 through 57310); and the FY 2018 IPPS/LTCH PPS final rule (82 FR 58536 through 58547).

In this FY 2019 IPPS/LTCH PPS final rule, we present our policies related to the annual update to the LTCH PPS standard Federal payment rate for FY 2019.

The update to the LTCH PPS standard Federal payment rate for FY 2019 is presented in section V.A. of the Addendum to this final rule. The components of the annual update to the LTCH PPS standard Federal payment rate for FY 2019 are discussed below, including the statutory reduction to the annual update for LTCHs that fail to submit quality reporting data for FY 2019 as required by the statute (as discussed in section VII.E.2.c. of the preamble of this final rule). In addition, as we proposed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20592), we made an adjustment to the LTCH PPS standard Federal payment rate to account for the estimated effect of the changes to the area wage level adjustment for FY 2019 on estimated aggregate LTCH

PPS payments, in accordance with § 412.523(d)(4) (as discussed in section V.B. of the Addendum to this final rule).

## 2. FY 2019 LTCH PPS Standard Federal Payment Rate Annual Market Basket Update

### a. Overview

Historically, the Medicare program has used a market basket to account for input price increases in the services furnished by providers. The market basket used for the LTCH PPS includes both operating and capital related costs of LTCHs because the LTCH PPS uses a single payment rate for both operating and capital-related costs. We adopted the 2013-based LTCH market basket for use under the LTCH PPS beginning in FY 2017 (81 FR 57100 through 57102). For additional details on the historical development of the market basket used under the LTCH PPS, we refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53467 through 53476), and for a complete discussion of the LTCH market basket and a description of the methodologies used to determine the operating and capital-related portions of the 2013-based LTCH market basket, we refer readers to section VII.D. of the preamble of the FY 2017 IPPS/LTCH PPS proposed and final rules (81 FR 25153 through 25167 and 81 FR 57086 through 57099, respectively).

Section 3401(c) of the Affordable Care Act provides for certain adjustments to any annual update to the LTCH PPS standard Federal payment rate and refers to the timeframes associated with such adjustments as a “rate year.” We note that, because the annual update to the LTCH PPS policies, rates, and factors now occurs on October 1, we adopted the term “fiscal year” (FY) rather than “rate year” (RY) under the LTCH PPS

beginning October 1, 2010, to conform with the standard definition of the Federal fiscal year (October 1 through September 30) used by other PPSs, such as the IPPS (75 FR 50396 through 50397). Although the language of sections 3004(a), 3401(c), 10319, and 1105(b) of the Affordable Care Act refers to years 2010 and thereafter under the LTCH PPS as “rate year,” consistent with our change in the terminology used under the LTCH PPS from “rate year” to “fiscal year,” for purposes of clarity, when discussing the annual update for the LTCH PPS standard Federal payment rate, including the provisions of the Affordable Care Act, we use “fiscal year” rather than “rate year” for 2011 and subsequent years.

b. Annual Update to the LTCH PPS Standard Federal Payment Rate for FY 2019

CMS has used an estimated market basket increase to update the LTCH PPS. As noted above, we adopted the 2013-based LTCH market basket for use under the LTCH PPS beginning in FY 2017. The 2013-based LTCH market basket is based solely on the Medicare cost report data submitted by LTCHs and, therefore, specifically reflects the cost structures of only LTCHs. (For additional details on the development of the 2013-based LTCH market basket, we refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 57085 through 57099).) We continue to believe that the 2013-based LTCH market basket appropriately reflects the cost structure of LTCHs for the reasons discussed when we adopted its use in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57100). Therefore, in this final rule, as we proposed, we used the 2013-based LTCH market basket to update the LTCH PPS standard Federal payment rate for FY 2019.

Section 1886(m)(3)(A) of the Act provides that, beginning in FY 2010, any annual update to the LTCH PPS standard Federal payment rate is reduced by the adjustments specified in clauses (i) and (ii) of subparagraph (A). Clause (i) of section 1886(m)(3)(A) of the Act provides for a reduction, for FY 2012 and each subsequent rate year, by the productivity adjustment described in section 1886(b)(3)(B)(xi)(II) of the Act (that is, “the multifactor productivity (MFP) adjustment”). Clause (ii) of section 1886(m)(3)(A) of the Act provides for a reduction, for each of FYs 2010 through 2019, by the “other adjustment” described in section 1886(m)(4)(F) of the Act.

Section 1886(m)(3)(B) of the Act provides that the application of paragraph (3) of section 1886(m) of the Act may result in the annual update being less than zero for a rate year, and may result in payment rates for a rate year being less than such payment rates for the preceding rate year.

c. Adjustment to the LTCH PPS Standard Federal Payment Rate under the Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

In accordance with section 1886(m)(5) of the Act, the Secretary established the Long-Term Care Hospital Quality Reporting Program (LTCH QRP). The reduction in the annual update to the LTCH PPS standard Federal payment rate for failure to report quality data under the LTCH QRP for FY 2014 and subsequent fiscal years is codified under 42 CFR 412.523(c)(4). The LTCH QRP, as required for FY 2014 and subsequent fiscal years by section 1886(m)(5)(A)(i) of the Act, applies a 2.0 percentage point reduction to any update under § 412.523(c)(3) for an LTCH that does not submit quality reporting data to the Secretary in accordance with section 1886(m)(5)(C) of the Act with

respect to such a year (that is, in the form and manner and at the time specified by the Secretary under the LTCH QRP) (§ 412.523(c)(4)(i)). Section 1886(m)(5)(A)(ii) of the Act provides that the application of the 2.0 percentage points reduction may result in an annual update that is less than 0.0 for a year, and may result in LTCH PPS payment rates for a year being less than such LTCH PPS payment rates for the preceding year.

Furthermore, section 1886(m)(5)(B) of the Act specifies that the 2.0 percentage points reduction is applied in a noncumulative manner, such that any reduction made under section 1886(m)(5)(A) of the Act shall apply only with respect to the year involved, and shall not be taken into account in computing the LTCH PPS payment amount for a subsequent year). These requirements are codified in the regulations at § 412.523(c)(4). (For additional information on the history of the LTCH QRP, including the statutory authority and the selected measures, we refer readers to section VIII.C. of the preamble of this final rule.)

d. Annual Market Basket Update Under the LTCH PPS for FY 2019

Consistent with our historical practice, we estimate the market basket increase and the MFP adjustment based on IGI's forecast using the most recent available data. Based on IGI's second quarter 2018 forecast, the FY 2019 full market basket estimate for the LTCH PPS using the 2013-based LTCH market basket is 2.9 percent. The current estimate of the MFP adjustment for FY 2019 based on IGI's second quarter 2018 forecast is 0.8 percent.

For FY 2019, section 1886(m)(3)(A)(i) of the Act requires that any annual update to the LTCH PPS standard Federal payment rate be reduced by the productivity

adjustment (“the MFP adjustment”) described in section 1886(b)(3)(B)(xi)(II) of the Act. Consistent with the statute, as we proposed, we are reducing the full estimated FY 2019 market basket increase by the FY 2019 MFP adjustment. To determine the market basket increase for LTCHs for FY 2019, as reduced by the MFP adjustment, consistent with our established methodology, we subtracted the FY 2019 MFP adjustment from the estimated FY 2019 market basket increase. Furthermore, sections 1886(m)(3)(A)(ii) and 1886(m)(4)(E) of the Act requires that any annual update to the LTCH PPS standard Federal payment rate for FY 2019 be reduced by the “other adjustment” described in paragraph (4), which is 0.75 percent for FY 2019. Therefore, following application of the productivity adjustment, as we proposed, we are further reducing the adjusted market basket update (that is, the full FY 2019 market basket increase less the MFP adjustment) by the “other adjustment” specified by sections 1886(m)(3)(A)(ii) and 1886(m)(4) of the Act. (For additional details on our established methodology for adjusting the market basket increase by the MFP adjustment and the “other adjustment” required by the statute, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51771).)

For FY 2019, section 1886(m)(5) of the Act requires that for LTCHs that do not submit quality reporting data as required under the LTCH QRP, any annual update to an LTCH PPS standard Federal payment rate, after application of the adjustments required by section 1886(m)(3) of the Act, shall be further reduced by 2.0 percentage points. Therefore, the update to the LTCH PPS standard Federal payment rate for FY 2019 for LTCHs that fail to submit quality reporting data under the LTCH QRP, the full LTCH PPS market basket increase estimate, subject to the MFP adjustment as required under

section 1886(m)(3)(A)(i) of the Act and an additional reduction required by sections 1886(m)(3)(A)(ii) and 1886(m)(4) of the Act, is also further reduced by 2.0 percentage points.

In this FY 2019 IPPS/LTCH PPS final rule, in accordance with the statute, as we proposed, we reduced the FY 2019 full market basket estimate of 2.9 percent (based on IGI's second quarter 2018 forecast of the 2013-based LTCH market basket) by the FY 2019 MFP adjustment of 0.8 percentage point (based on IGI's second quarter 2018 forecast). Following application of the MFP adjustment, as we proposed, we are reducing the adjusted market basket update of 2.1 percent (2.9 percent minus 0.8 percentage point) by 0.75 percentage point, as required by sections 1886(m)(3)(A)(ii) and 1886(m)(4)(F) of the Act. Therefore, under the authority of section 123 of the BBRA as amended by section 307(b) of the BIPA, we are establishing an annual market basket update to the LTCH PPS standard Federal payment rate for FY 2019 of 1.35 percent (that is, the most recent estimate of the LTCH PPS market basket increase of 2.9 percent, less the MFP adjustment of 0.8 percentage point, and less the 0.75 percentage point required under section 1886(m)(4)(F) of the Act). Accordingly, consistent with our proposal, we are revising § 412.523(c)(3) by adding a new paragraph (xv), which specifies that the LTCH PPS standard Federal payment rate for FY 2019 is the LTCH PPS standard Federal payment rate for the previous LTCH PPS payment year updated by 1.35 percent, and as further adjusted, as appropriate, as described in § 412.523(d) (including the budget neutrality adjustment for the elimination of the 25-percent threshold policy under § 412.523(d)(6) discussed in section VII.E. of the preamble of this final rule). For

LTCHs that fail to submit quality reporting data under the LTCH QRP, under § 412.523(c)(3)(xv) in conjunction with § 412.523(c)(4), as we proposed, we further reduced the annual update to the LTCH PPS standard Federal payment rate by 2.0 percentage points, in accordance with section 1886(m)(5) of the Act. Accordingly, we are establishing an annual update to the LTCH PPS standard Federal payment rate of -0.65 percent (that is, 1.35 percent minus 2.0 percentage points) for FY 2019 for LTCHs that fail to submit quality reporting data as required under the LTCH QRP.

Consistent with our historical practice, as we proposed, we used a more recent estimate of the market basket and the MFP adjustment in this final rule to establish an annual update to the LTCH PPS standard Federal payment rate for FY 2019 under § 412.523(c)(3)(xv). (We note that, consistent with historical practice, we also are adjusting the FY 2019 LTCH PPS standard Federal payment rate by an area wage level budget neutrality factor in accordance with § 412.523(d)(4) (as discussed in section V.B.5. of the Addendum to this final rule).)

#### E. Elimination of the “25-Percent Threshold Policy” Adjustment (§ 412.538)

The “25-percent threshold policy” is a per discharge payment adjustment in the LTCH PPS that is applied to payments for Medicare patient discharges from an LTCH when the number of such patients originating from any single referring hospital is in excess of the applicable threshold for a given cost reporting period (such threshold is generally set at 25 percent, with exceptions for rural and urban single or MSA-dominant hospitals). If an LTCH exceeds the applicable threshold during a cost reporting period, payment for the discharge that puts the LTCH over its threshold and all discharges

subsequent to that discharge in the cost reporting period from the referring hospital are adjusted at cost report settlement (discharges not in excess of the threshold are unaffected by the 25-percent threshold policy). The 25-percent threshold policy was originally established in the FY 2005 IPPS final rule for LTCH HwHs and satellites (69 FR 49191 through 49214). We later expanded the 25-percent threshold policy in the RY 2008 LTCH PPS final rule to include all LTCHs and LTCH satellite facilities (72 FR 26919 through 26944). Several laws have mandated delayed implementation of the 25-percent threshold policy. For more details on the various laws that delayed the full implementation of the 25-percent threshold policy, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38318 through 38319).

In light of the further statutory delays and our continued consideration of public comments received in response to our proposal to consolidate and streamline the 25-percent threshold policy in the FY 2017 IPPS/LTCH PPS proposed rule, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38320), we adopted a 1-year regulatory moratorium on the implementation of the 25-percent threshold policy; that is, we imposed a regulatory moratorium on our implementation of the provisions of § 412.538 until October 1, 2018.

Since the introduction of the site neutral payment rate in FY 2016, many public commenters have asserted that the new site neutral payment rate would alleviate the policy concerns underlying the establishment of the 25-percent threshold policy. As we stated in our response to those comments in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57106) and in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38320), at that

time, we were not convinced that this was the case. In addition, we received many public comments urging CMS to permanently rescind the 25-percent threshold policy in response to the Request for Information on CMS Flexibilities and Efficiencies that was included in the FY 2018 IPPS/LTCH PPS proposed rule (82 FR 20159). These public comments also asserted that this policy is no longer necessary in light of the new dual payment rate system.

As discussed in the FY 2018 IPPS/LTCH PPS proposed and final rules (82 FR 20028 and 82 FR 38318 through 38319, respectively), the best available LTCH claims data at the time of the development of both rules (FY 2016 discharges) included many LTCH discharges that occurred during FY 2016 that were not yet subject to the site neutral payment rate because the statute provides that the site neutral payment rate be phased in, effective with LTCH cost reporting periods beginning on or after October 1, 2015 (that is, LTCH cost reporting periods beginning in FY 2016). Therefore, all FY 2016 discharges that occurred in a LTCH cost reporting period that began prior to October 1, 2016 were not subject to the site neutral payment rate.

Given these widespread concerns, the longstanding statutory delays, and the limited experience under the new dual rate payment system, we implemented the 1-year regulatory moratorium for FY 2018 to allow for the opportunity to do an analysis of LTCH admission practices under the new dual payment rate under the LTCH PPS based on more complete data. This implementation plan was, in part, intended to avoid confusion and expending unnecessary resources in implementation should our analysis

ultimately conclude that the policy concerns underlying the 25-percent threshold policy have been moderated (82 FR 38320).

Since establishing the current regulatory moratorium in the FY 2018 IPPS/LTCH PPS rulemaking, we have continued to receive additional communications seeking an end to our 25-percent threshold policy. We have considered these requests, along with reconsidering the many requests and public comments received through rulemaking, as we have reviewed our policies in the context of our ongoing initiative to reduce unnecessary regulatory burden. Our review also took note of the significant changes to LTCH admission practices and the LTCH PPS payment structure since the advent of the 25-percent threshold policy's adoption, such as the introduction of the site neutral payment rate beginning in FY 2016. One effect of these changes is the creation of a financial incentive for LTCHs to limit admissions according to the criteria for payment at the LTCH PPS standard Federal payment rate. While these changes do not specifically address our regulatory requirement to ensure that an LTCH does not act as an IPPS step-down unit, we believe that the creation of these financial incentives likely results in LTCH providers closely considering the appropriateness of admitting a potential transfer to an LTCH setting, regardless of the referral source, thereby lessening the concerns that led to the introduction of the 25-percent threshold policy.

In light of these factors, we recognize that the policy concerns that led to the 25-percent threshold policy may have been ameliorated, and that implementation of the 25-percent threshold policy would place a regulatory burden on providers. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20468), we stated that we believe it

was appropriate at that time to propose the removal of this payment adjustment policy. We also stated that, for these same reasons, we believe the specific regulatory framework of the 25-percent threshold policy at § 412.538 is no longer an appropriate mechanism to ensure that the statutory requirement that an LTCH does not act as a defacto unit of an IPPS hospital is not violated. Therefore, in the proposed rule, we proposed to eliminate the 25-percent threshold policy under § 412.538.

In the proposed rule, we indicated the goal of our proposal to eliminate the 25-percent threshold policy is to reduce unnecessary regulatory burden. Independent of this goal, we continue to believe aggregate LTCH PPS payments are sufficient. Therefore, we do not believe that it would be appropriate to change the aggregate amount of LTCH PPS payments on a permanent basis. As described earlier, the 25-percent threshold policy would have reduced the LTCH PPS payments for certain discharges, and if finalized, the elimination of the 25-percent threshold policy would result in an increase in aggregate LTCH PPS payments. As a result, we also stated in the proposed rule that we believe this proposal should be accomplished in a budget-neutral manner.

With respect to the issue about the adequacy of LTCH payment levels, we note that MedPAC, in each of its annual updates to Congress since 2011, has concluded that current LTCH PPS payment levels are appropriate, and thus has recommended since 2011 the elimination of the annual update to the LTCH payment rates. (For example, we refer readers to MedPAC's March 2011 "Report to the Congress: Medicare Payment Policy," Chapter 10, page 246, and MedPAC's March 2018 "Report to the Congress: Medicare Payment Policy," Chapter 11, page 315.) We believe application of this burden

reduction-related proposal to eliminate the 25-percent threshold policy would result in an unwarranted increase in aggregate payment levels. Therefore, in the proposed rule, we stated that, if we finalized our proposal to eliminate the 25-percent threshold policy, under the broad authority of section 123 of the BBRA, as amended by section 307(b) of the BIPA, we also would make a one-time, permanent adjustment to the FY 2019 LTCH PPS standard Federal payment rate. That adjustment would be set such that our projection of aggregate LTCH payments in FY 2019 that would have been paid if the 25-percent threshold policy had gone into effect (that is, as if the 25-percent threshold policy under § 412.538 remained in effect during FY 2019) are equal to our projection of aggregate LTCH payments in FY 2019 payments for such cases in the absence of that policy.

To do this, we proposed to remove the provisions of § 412.538, reserving this section, and add a new paragraph (d)(6) to § 412.523 to provide for a one-time permanent budget neutrality factor adjustment to the LTCH PPS standard Federal payment rate to ensure that removal of the 25-percent threshold policy at existing § 412.538 is budget neutral. (We note that, in proposed new § 412.523(d)(6), we refer to the 25-percent threshold policy as “limitation on long-term care hospital admissions from referring hospitals”, which is the title of existing § 412.538.) In addition, we proposed to make conforming technical changes to remove paragraph (c)(2)(v) of § 412.522 and paragraph (d)(6) of § 412.525.

Comment: Many commenters supported CMS’ proposal to eliminate the 25-percent threshold policy, but expressed concerns with the corresponding budget

neutrality adjustment. Some of these commenters disagreed with CMS' proposal of applying a budget neutrality adjustment because they believed that such an adjustment is not needed. Commenters that generally opposed the application of a budget neutrality adjustment stated that: (1) CMS has not recovered payments for violations of the 25-percent threshold policy and, therefore, it would be incorrect to state that eliminating the 25-percent threshold policy would increase Medicare spending; (2) LTCHs would adjust to a fully implemented 25-percent threshold policy, thereby minimizing the penalty amount; (3) implementation of the site neutral payment rate has led to yearly decreases in LTCH payments from FY 2016 to FY 2019 due to a reduction in the overall volume of LTCH cases and this decrease in LTCH payments eliminates the need for any further budget neutrality adjustments; and (4) the statutory delay in FY 2017 (and prior years) and the regulatory delay in FY 2018 in the full implementation of the 25-percent threshold policy were never paired with a budget neutrality adjustment and, therefore, an adjustment as a result of the elimination of the policy is unwarranted. Commenters also addressed the proposed budget neutrality adjustment calculation methodology (which we discuss in detail below).

Response: We appreciate the commenters' support for our proposal to eliminate the 25-percent threshold policy. In response to the commenters who opposed the application of a budget neutrality adjustment, we disagree that a budget neutrality adjustment is not needed to maintain aggregate LTCH PPS payments at the same level that would have been if we were not eliminating this policy. As described earlier, if the 25-percent threshold policy were to go into full effect, it would reduce the LTCH PPS

payments for certain discharges; therefore, an elimination of the 25-percent threshold policy would necessarily result in an increase in aggregate LTCH PPS payments. As we have stated, we believe aggregate LTCH PPS payments are sufficient and, therefore, the budget neutrality adjustment is necessary to ensure the elimination of the 25-percent threshold does not increase aggregate LTCH PPS payments. Specifically, a budget neutrality adjustment is necessary to ensure that the elimination of the 25-percent threshold policy does not increase aggregate LTCH PPS payments *in FY 2019 and future years*, and this is independent of aggregate payment levels in past years, including any adjustment (or lack of) to payments for violations of the 25-percent threshold policy. Moreover, we note that, while some LTCHs may indeed adjust to a fully implemented 25-percent threshold policy, thereby minimizing the penalty amount, this compliance with policy does not ensure budget neutrality. Similarly, any reduction in aggregate LTCH PPS payments as a result of the implementation of the site neutral payment rate, including any decrease in the annual number of LTCH cases, does not ensure that the elimination of the 25-percent threshold policy would not increase aggregate LTCH PPS payments in FY 2019 and future years.

While the statutory and regulatory delays in prior years were not implemented in a budget neutrality manner, this does not preclude the application of such an adjustment at this time. We also note that, both the past statutory and regulatory delays were temporary, unlike our proposal to permanently eliminate the 25-percent threshold policy, which differentiates our proposal from past policy.

After consideration of the public comments we received, we are finalizing, without modification, our proposal to remove and reserve the provisions of § 412.538, add a new paragraph (d)(6) to § 412.523, and make further conforming changes to existing regulations.

As described earlier, in the proposed rule, we proposed to make a one-time, permanent adjustment to the FY 2019 LTCH PPS standard Federal payment rate, which would be set such that our projection of aggregate LTCH payments in FY 2019 that would have been paid if the 25-percent threshold policy had gone into effect (that is, as if the 25-percent threshold policy under § 412.538 remained in effect during FY 2019) are equal to our projection of aggregate LTCH payments in FY 2019 payments for such cases in the absence of that policy. We also proposed that this budget neutrality adjustment would only be applied to the LTCH PPS standard Federal payment rate (or such portion of a transitional blended payment) because payments made under the site neutral payment rate would have been unaffected by the 25-percent threshold policy. (Discharges in excess of the 25-percent threshold policy would be paid the lesser of the applicable LTCH payment or an IPPS equivalent payment. The site neutral payment rate would remain set at the lesser of the IPPS comparable amount or cost, neither of which would exceed the IPPS equivalent payment amount.) However, because the applicable site neutral payment rate for all LTCHs during all of FY 2019 is based on the transitional blended payment rate (that is, 50 percent of the site neutral payment rate and 50 percent of the LTCH PPS standard Federal payment rate), any adjustment applied to the LTCH

PPS standard Federal payment rate would also need to be applied to the LTCH PPS standard Federal rate portion of payments that affect site neutral payment rate cases.

Therefore, as noted earlier, in the proposed rule, we stated that we must account for the change in payments to both LTCH PPS standard Federal payment rate cases and site neutral payment rate cases when determining the budget neutrality adjustment. To do so, we proposed to use the following methodology to determine the budget neutrality factor that would be applied to the FY 2019 LTCH PPS standard Federal payment rate using the best available LTCH claims data (the December 2017 update of the FY 2017 MedPAR files). Consistent with historical practice, in the proposed rule, we stated that if more recent data became available, we would use such data for the final rule (83 FR 20468 through 20469).

Step 1--Simulate estimated aggregate FY 2019 LTCH PPS payments (that is, both LTCH PPS standard Federal payment rate payment cases and site neutral payment rate cases) without the 25-percent threshold policy at § 412.538.

Step 2--Estimate aggregate payments incorporating the payment reduction under the 25-percent threshold policy at § 412.538 as follows:

- *Step 2a*--Determine the applicable percentage threshold for each LTCH. In general, the applicable percentage threshold is 25 percent; however, the applicable percentage threshold is 50 percent for exclusively rural LTCHs, and LTCHs located in an MSA with an MSA-dominant hospital get an adjusted threshold (§ 412.538(e)). To determine the applicable percentage threshold for LTCHs located in an MSA with an MSA-dominant hospital, we used IPPS claims data from the March 2017 update of the

FY 2016 MedPAR files to determine, for each CBSA, the highest discharge percentage among all IPPS providers within that CBSA. (The CBSA-based geographic classifications currently used under the LTCH PPS are based on the OMB labor market area delineations based on the 2010 Decennial Census data (that is, are an MSA under § 412.503). The applicable percentage threshold for a given CBSA is this highest discharge percentage unless this percentage is higher than 50 percent or lower than 25 percent. In those cases, the threshold is 50 percent or 25 percent, respectively (§ 412.538(e)(3)).

- *Step 2b*--For each LTCH, determine the percentage of Medicare discharges admitted from any single referring IPPS hospital, consistent with § 412.538(d)(2). To do so, as discussed earlier, we used the March 2017 update of the FY 2016 MedPAR files to determine the total discharges for each LTCH and the number of applicable transfers from each referring IPPS hospital. The referring IPPS hospital's applicable transfers are the LTCH's Medicare discharges that were admitted from that single referring IPPS hospital where an outlier payment was not made to that referring hospital and for whom payment was not made by a Medicare Advantage plan. The ratio of the referring IPPS hospital's applicable transfers to the LTCH's total Medicare discharges, multiplied by 100, is the percentage of Medicare discharges admitted from any single referring IPPS hospital.

- *Step 2c*--Estimate the aggregate payment reduction under the 25-percent threshold policy:

(i) Determine the LTCH's discharges that are in excess of the applicable percentage threshold by comparing the LTCH's percentage of Medicare discharges admitted from each single referring IPPS hospital (Step 2b) to the LTCH's applicable percentage threshold (Step 2a).

(ii) Estimate the aggregate payment reduction under the 25-percent threshold policy for the Medicare discharges that caused the LTCH to exceed or remain in excess of the threshold by summing the difference between:

- The original LTCH PPS payment amount (that is, the otherwise applicable LTCH PPS payment without an adjustment under the 25-percent threshold policy); and
- The estimated adjusted payment amount under the 25-percent threshold policy.

(We note that there is no payment adjustment under the 25-percent threshold policy for discharges that are not in excess of the LTCH's applicable percentage threshold.)

Step 3--Calculate the ratio of the estimated aggregate FY 2019 LTCH PPS payments with and without the estimated aggregate payment reduction under the 25-percent threshold policy to determine the adjustment factor that would need to be applied to the FY 2019 LTCH PPS standard Federal payment rate to achieve budget neutrality (that is, the adjustment that would have to be applied to the FY 2019 LTCH PPS standard Federal payment rate so that the estimated aggregate payments calculated in Step 1 are equal to the estimated aggregate payments with the reduction as calculated in Step 2). This ratio is calculated by dividing the estimated FY 2019 payments without incorporating the estimated aggregate payment reduction under the 25-percent threshold policy at § 412.538 (calculated in Step 1) by the estimated FY 2019 payments

incorporating the estimated aggregate payment reduction under the 25-percent threshold policy at § 412.538 (calculated in Step 2). We note that, under Step 3, an iterative process is used to determine the adjustment factor that would need to be applied to the FY 2019 LTCH PPS standard Federal payment rate to achieve budget neutrality because the portion of estimated FY 2019 payments that are not based on the LTCH PPS standard Federal payment rate (that is, the IPPS comparable amount portion under the SSO payment methodology and the site neutral payment rate portion of the transitional blended payment rate payment for site neutral payment rate discharges in FY 2019) are not affected by the application of budget neutrality factor.

We also note that, under this step, the proposed budget neutrality adjustment factor would be applied to the FY 2019 LTCH PPS standard Federal payment rate after the application of the FY 2019 annual update and the FY 2019 area wage level adjustment budget neutrality factor.

Comment: One commenter suggested that CMS consider alternate impact methodologies for the budget neutrality adjustment to limit or avoid impacting providers who have no need of relief from the 25-percent threshold policy. Other commenters, including some commenters who opposed the budget neutrality adjustment in concept, stated that the proposed methodology for calculating the budget neutrality adjustment overstates the cost of eliminating the 25-percent threshold policy by failing to include behavioral responses or year-to-year trends in violations, as well as the full implementation of the site neutral payment rate. In particular, some commenters suggested that the estimated cost of eliminating the 25-percent threshold policy needs to

be reduced in FY 2020 and subsequent years to reflect the phase-out of the transitional blended payment rate payments to site neutral payment rate cases. Some commenters believed that, if there is a budget neutrality adjustment, it should not be permanent and should only apply in FY 2019 and have no impact in FY 2020 and subsequent years. Some commenters also requested that the most recent data available be used to determine the budget neutrality adjustment, and some commenters specifically requested that FY 2017 data be used instead of FY 2016 data that were used in the calculations determined using the proposed methodology.

Response: We appreciate the commenters' input. While many commenters believed that our proposed methodology used to calculate the budget neutrality adjustment overstated the estimated cost of eliminating the 25-percent threshold policy due to a lack of accounting for certain behavioral assumptions, with one exception, commenters did not provide a methodology for quantifying such behavioral assumptions, and that suggestion does not account for other behavioral assumptions that could raise the estimated cost of the removal of the policy. The commenters' suggestion was to assume a 50-percent reduction in violations because this is the midpoint benchmark between assuming the behavioral adjustment would cause no change in behavior (a 0 percent reduction in violations) and the behavioral adjustment would lead to full compliance (a 100 percent reduction in violations), and these commenters did not provide any evidence for this assumption.

However, while we agree with the commenters that there are behavioral assumptions that could lower the estimated cost of the elimination of the 25-percent

threshold policy (such as those suggested by commenters), we believe that there are equally viable behavioral assumptions that could raise the estimated cost of eliminating the 25-percent threshold policy that are also not accounted for in our proposed estimate. For example, once the 25-percent threshold policy is retired, there would be no incentive for a hospital to limit admissions from a single referring hospital, which could lead to behaviors that would have been violations if the policy were to be fully implemented and, therefore, increase the estimated cost of elimination of the policy. In addition, the continuation of the transition to the site neutral payment system could result in a higher percentage of cases being paid under the LTCH PPS standard Federal payment rate (as opposed to the site neutral payment rate), which also could increase the costs of the elimination of the policy. Because we do not have (and commenters did not suggest) any way to use existing data or information to reasonably account for any of these behavioral assumptions, we do not believe it is appropriate to introduce unnecessary uncertainty into our estimate. On the contrary, we believe that including adjustments with insufficient support would constitute arbitrary and capricious action, in violation of the requirements of the Administrative Procedure Act. We believe that the most recent available historical data are the best basis we have to estimate the effects and costs of elimination of the 25-percent threshold policy, and do not inherently bias the estimate towards overstating or understating the cost. Therefore, we believe the most recent available historical data are the most appropriate source to use to calculate the budget neutrality adjustment, and we are adopting commenters' suggestion to use the most recent data available to

determine the budget neutrality adjustment, which are claims from the March 2018 update of the FY 2017 MedPAR files.

We agree with commenters that our estimated cost of eliminating the 25-percent threshold policy based on the transitional blended payment rate for FY 2019 does not take into account that site neutral payment rate cases will no longer be paid based on a transitional blended payment basis in FY 2020 and subsequent years, and, therefore, applying a single one-time permanent budget neutrality adjustment would overly reduce payments for FY 2020 and beyond. To address this, we are modifying our proposed methodology for calculating the budget neutrality adjustment as described below to address the rolling end of the transitional blended payment rate to site neutral payment rate cases.

In this FY 2019 IPPS/LTCH PPS final rule, to account for the rolling end to the transitional blended payment rate, we are determining individual budget neutrality adjustments that correspond to the various stages of the phase-out of the transitional blended payment rate as follows:

- For FY 2019, the budget neutrality adjustment under § 412.523(d)(6) will be calculated using the estimated cost of eliminating the 25-percent threshold policy, whereby all site neutral payment rate discharges are paid the transitional blended payment rate. This temporary adjustment will only apply to the LTCH PPS standard Federal payment rate for FY 2019.
- For FY 2020, the budget neutrality adjustment will be calculated using the estimated cost of eliminating the 25-percent threshold policy, whereby all site neutral

payment rate discharges that would occur in cost reporting periods beginning before October 1, 2019, are paid the transitional blended payment, and those site neutral discharges that would occur in cost reporting periods beginning on or after October 1, 2019, are paid the full site neutral payment rate. This temporary adjustment will only apply to the LTCH PPS standard Federal payment rate for FY 2020.

- For FY 2021 and beyond, the budget neutrality adjustment will be calculated using the estimated cost of eliminating the 25-percent threshold policy, whereby all site neutral payment rate discharges are paid the full site neutral payment rate. As such, the budget neutrality adjustment will be calculated using only aggregated estimated LTCH PPS standard Federal rate payments because there will be no portion of site neutral payment rate payments based on the LTCH PPS standard Federal rate for discharges occurring in FY 2021 and subsequent years. This permanent adjustment will apply to the LTCH PPS standard Federal payment rate for FY 2021 and subsequent years (consistent with our proposal prior to this modification to address the rolling end to the transitional blended payment rate).

As proposed, this budget neutrality adjustment will only be applied to the LTCH PPS standard Federal payment rate (or such portion of a transitional blended payment) because payments made under the site neutral payment rate are unaffected by the 25-percent threshold policy. We also are revising our proposed changes to § 412.523(d)(6) to reflect the a one-time, temporary budget neutrality adjustment in FY 2019 and FY 2020 and a one-time, permanent budget neutrality adjustment in FY 2021, as described above.

In summary, for the reasons discussed earlier, we are not making any adjustments to our methodology for calculating the budget neutrality adjustment for potential behavioral responses. As discussed in more detail above, we agree with the commenters that there are potential behavior responses to the full implementation of the 25-percent threshold policy, but we believe that none of these can be estimated with sufficient justification to be incorporated into an actuarial assumption in a nonarbitrary manner. We also agree with commenters that the most recent available historical data is the most appropriate source to use to calculate the budget neutrality adjustment and, as such, used claims from the March 2018 update of the FY 2017 MedPAR files for our budget neutrality calculations in this final rule. Finally, in response to public comments we received, we are modifying our proposed budget neutrality adjustment methodology so that the rolling end of the transitional blended payment rate for site neutral payment rate cases is accounted for in our estimated cost of eliminating the 25-percent threshold policy.

After consideration of the public comments we received, we are finalizing our proposed methodology, with the modification described above to account for the transitional blended payment rate payments to site neutral cases. Based on the updated LTCH claims data used for this final rule (the March 2018 update of the FY 2017 MedPAR files), we estimate that the costs of the elimination of the 25-percent threshold policy will increase aggregate LTCH PPS payments by approximately \$35 million (compared to \$36 million as stated in the proposed rule) in FY 2019; by approximately \$33 million in FY 2020 (during the rolling end of the transitional blended payment rate

for site neutral payment rate cases); and by approximately \$28 million in FY 2021 and subsequent years. For this final rule, using the steps in the methodology described above, we have determined the following budget neutrality adjustment factors for the costs of the elimination of the 25-percent threshold policy:

- For FY 2019, a temporary, one-time factor of 0.990884;
- For FY 2020, a temporary, one-time factor of 0.990741; and
- For FY 2021 and subsequent years, a permanent, one-time factor of 0.991249.

To determine the budget neutrality adjustment for FY 2020, the rolling end of the transitional blended payment rate for site neutral payment rate cases in FY 2020 requires us to estimate the LTCH PPS standard Federal payment rate payments to LTCH PPS standard Federal payment rate cases and the portion of the transitional blended payment rate payments to site neutral payment rate cases that are paid based on the LTCH PPS standard Federal payment rate in FY 2019. To do so, we used the same general method used to estimate total FY 2018 LTCH PPS payments for site neutral payment rate cases for purposes of the impact analysis in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38575 through 38576) because we continue to believe this approach is an appropriate approach to take into account the rolling end of the transitional payment method for site neutral payment rate cases.

In summary, under this approach, we grouped LTCHs based on the quarter their cost reporting periods will begin during FY 2020. For example, the 35 LTCHs with cost reporting periods that begin between October and December 2020 begin during the first quarter of FY 2020. For LTCHs grouped in each quarter of FY 2020, we modeled those

LTCHs' estimated site neutral payment rate payments under the transitional blended payment rate based on the quarter in which the LTCHs in each group would continue to be paid the transitional payment method for the site neutral payment rate cases.

For purposes of this estimate, then we assume the cost reporting period is the same for all LTCHs in each of the quarterly groups, and that this cost reporting period begins on the first day of that quarter. (For example, our first group consists of 35 LTCHs, whose cost reporting periods will begin in the first quarter of FY 2020. Therefore, for purposes of this estimate, we assumed all 35 LTCHs will begin their FY 2020 cost reporting periods on October 1, 2019.) Next, we estimated the proportion of site neutral payment rate cases in each of the quarterly groups, and we then assume this proportion is applicable for all four quarters of FY 2020. (For example, we estimate the first quarter group will discharge 6.2 percent of all FY 2020 site neutral payment rate cases and, therefore, we estimate that group of LTCHs will discharge 6.2 percent of all FY 2020 site neutral payment rate cases in each quarter of FY 2020.) Then, we used our model of estimated payments to estimate quarterly-based payments under the LTCH PPS standard Federal payment rate based on the assumptions described above.

Based on the fiscal year begin date information in the March 2018 update of the PSF and the LTCH claims from the March 2018 update of the FY 2017 MedPAR files, we found the following: 6.2 percent of site neutral payment rate cases are from 35 LTCHs whose cost reporting periods will begin during the first quarter of FY 2020; 22.2 percent of site neutral payment rate cases are from 102 LTCHs whose cost reporting periods will begin in the second quarter of FY 2020; 9.2 percent of site neutral payment

rate cases are from 56 LTCHs whose cost reporting periods will begin in the third quarter of FY 2020; and 62.4 percent of site neutral payment rate cases are from 217 LTCHs whose cost reporting periods will begin in the fourth quarter of FY 2020. Therefore, the following percentages apply in the approach described above:

- First Quarter FY 2020: 6.2 percent of site neutral payment rate cases (that is, the percentage of discharges from LTCHs whose FY 2020 cost reporting periods will begin in the first quarter of FY 2020) are no longer eligible for the transitional payment method, while the remaining 93.8 percent of site neutral payment rate discharges are eligible to be paid under the transitional payment method.

- Second Quarter FY 2020: 28.4 percent of site neutral payment rate second quarter discharges (that is, the percentage of discharges from LTCHs whose FY 2020 cost reporting periods will begin in the first or second quarter of FY 2020) are no longer eligible for the transitional payment method, while the remaining 71.6 percent of site neutral payment rate second quarter discharges are eligible to be paid under the transitional payment method.

- Third Quarter FY 2020: 37.6 percent of site neutral payment rate third quarter discharges (that is, the percentage of discharges from LTCHs whose FY 2020 cost reporting periods will begin in the first, second, or third quarter of FY 2020) are no longer eligible for the transitional payment method, while the remaining 62.4 percent of site neutral payment rate third quarter discharges are eligible to be paid under the transitional payment method.

- Fourth Quarter FY 2020: 100.0 percent of site neutral payment rate fourth quarter discharges (that is, the percentage of discharges from LTCHs whose FY 2020 cost reporting periods will begin in the first, second, third, or fourth quarter of FY 2020) are no longer eligible for the transitional payment method. Therefore, no site neutral payment rate case discharges are eligible to be paid under the transitional payment method.

Using this approach under the modified methodology for calculating the budget neutrality adjustment described above to address the rolling end of the transitional blended payment rate to site neutral payment rate cases, as noted above, we calculated a temporary, one-time budget neutrality adjustment factor of 0.990741 that will be applied to the LTCH PPS standard Federal payment rate for FY 2020.

For all LTCH discharges occurring in FY 2021 and beyond, all site all neutral payment rate discharges will be paid the full site neutral payment rate. Therefore, as described above, the permanent budget neutrality adjustment that will be applied to the LTCH PPS standard Federal payment rate for FY 2021, and subsequent years was calculated using only aggregate estimated LTCH PPS standard Federal rate payments because there will be no portion of site neutral payment rate payments based on the LTCH PPS standard Federal rate for discharges occurring in FY 2021 and subsequent years. Using the modified methodology for calculating the budget neutrality adjustment described above to address the rolling end of the transitional blended payment rate to site neutral payment rate cases, as noted above, we calculated a temporary, permanent budget

neutrality adjustment factor of 0.991249 that will be applied to the LTCH PPS standard Federal payment rate for FY 2021 and subsequent years.

As noted above, using the modified methodology for calculating the budget neutrality adjustment we are adopting in this final rule, we calculated a temporary, one-time budget neutrality adjustment factor of 0.990884 for FY 2019. Accordingly, in section V. of the Addendum to this final rule, to determine the FY 2019 LTCH PPS standard Federal payment rate, as we proposed, we applied the temporary one-time budget neutrality adjustment factor of 0.990884 for the costs of the elimination of the 25-percent threshold policy. The FY 2019 LTCH PPS standard Federal payment rate shown in Table 1E reflects this adjustment.

## **VIII. Quality Data Reporting Requirements for Specific Providers and Suppliers**

In section VIII. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20470 through 20515; 83 FR 20683 through 28604), we proposed changes to the following Medicare quality reporting systems:

- In section VIII.A., the Hospital IQR Program;
- In section VIII.B., the PCHQR Program; and
- In section VIII.C., the LTCH QRP.

In addition, in section VIII.D. of the preamble of the proposed rule (83 FR 20515 through 20544), we proposed changes to the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) for eligible hospitals and critical access hospitals (CAHs).

We refer readers to section I.A.2. of the preamble of this final rule for a discussion of the Meaningful Measures Initiative.

### A. Hospital Inpatient Quality Reporting (IQR) Program

#### 1. Background

##### a. History of the Hospital IQR Program

The Hospital IQR Program strives to put patients first by ensuring they are empowered to make decisions about their own healthcare along with their clinicians using information from data-driven insights that are increasingly aligned with meaningful quality measures. We support technology that reduces burden and allows clinicians to focus on providing high quality health care for their patients. We also support innovative approaches to improve quality, accessibility, and affordability of care, while paying

particular attention to improving clinicians' and beneficiaries' experiences when interacting with CMS programs. In combination with other efforts across the Department of Health and Human Services, we believe the Hospital IQR Program incentivizes hospitals to improve health care quality and value, while giving patients the tools and information needed to make the best decisions for them.

We seek to promote higher quality and more efficient health care for Medicare beneficiaries. This effort is supported by the adoption of widely-agreed upon quality measures. We have worked with relevant stakeholders to define measures of quality in almost every setting and currently measure some aspect of care for almost all Medicare beneficiaries. These measures assess structural aspects of care, clinical processes, patient experiences with care, and outcomes. We have implemented quality measure reporting programs for multiple settings of care. To measure the quality of hospital inpatient services, we implemented the Hospital IQR Program, previously referred to as the Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) Program. We refer readers to the FY 2010 IPPS/LTCH PPS final rule (74 FR 43860 through 43861) and the FY 2011 IPPS/LTCH PPS final rule (75 FR 50180 through 50181) for detailed discussions of the history of the Hospital IQR Program, including the statutory history, and to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50217 through 50249), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49660 through 49692), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57148 through 57150), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38326 through 38328 and 82 FR 38348) for the measures we have

previously adopted for the Hospital IQR Program measure set through the FY 2019 and FY 2020 payment determinations and subsequent years.

b. Maintenance of Technical Specifications for Quality Measures

The technical specifications for chart-abstracted clinical process of care measures used in the Hospital IQR Program, or links to websites hosting technical specifications, are contained in the CMS/The Joint Commission (TJC) Specifications Manual for National Hospital Inpatient Quality Measures (Specifications Manual). This Specifications Manual is posted on the QualityNet website at:

<http://www.qualitynet.org/>. We generally update the Specifications Manual on a semiannual basis and include in the updates detailed instructions and calculation algorithms for hospitals to use when collecting and submitting data on required chart-abstracted clinical process of care measures.

The technical specifications for electronic clinical quality measures (eCQMs) used in the Hospital IQR Program are contained in the CMS Annual Update for Hospital Quality Reporting Programs (Annual Update). This Annual Update is posted on the Electronic Clinical Quality Improvement (eCQI) Resource Center web page at:

<https://ecqi.healthit.gov/>. We generally update the measure specifications on an annual basis through the Annual Update, which includes code updates, logic corrections, alignment with current clinical guidelines, and additional guidance for hospitals and EHR vendors to use in order to collect and submit data on eCQMs from hospital EHRs. We refer readers to section VIII.A.11.d.(1) of the preamble of this final rule in which we

discuss the transition to Clinical Quality Language (CQL) beginning with the Annual Update that was published in May 2018 and for implementation in CY 2019.

In addition, we believe that it is important to have in place a subregulatory process to incorporate nonsubstantive updates to the measure specifications for measures we have adopted for the Hospital IQR Program so that these measures remain up-to-date. We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53504 through 53505) and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50203) for our policy for using a subregulatory process to make nonsubstantive updates to measures used for the Hospital IQR Program.

We recognize that some changes made to measures undergoing maintenance review are substantive in nature and might not be appropriate for adoption using a subregulatory process. For substantive measure updates, after submission to the Measures Under Consideration list and evaluation by the Measure Applications Partnership (MAP), we will continue to use rulemaking to adopt those substantive measure updates for the Hospital IQR Program. We refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 57111) for additional discussion of the maintenance of technical specifications for quality measures for the Hospital IQR Program. We also refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50202 through 50203) for additional details on the measure maintenance process.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20470), we did not propose any changes to our policies on the measure maintenance process.

c. Public Display of Quality Measures

Section 1886(b)(3)(B)(viii)(VII) of the Act was amended by the Deficit Reduction Act (DRA) of 2005. Section 5001(a) of the DRA requires that the Secretary establish procedures for making information regarding measures available to the public after ensuring that a hospital has the opportunity to review its data before they are made public. Our current policy is to report data from the Hospital IQR Program as soon as it is feasible on CMS websites such as the *Hospital Compare* website, <http://www.medicare.gov/hospitalcompare> after a 30-day preview period (78 FR 50776 through 50778).

Information is available to the public on the *Hospital Compare* website. *Hospital Compare* is an interactive web tool that assists beneficiaries and providers by providing information on hospital quality of care to those who need to select a hospital and to support quality improvement efforts. The Hospital IQR Program currently includes measures capturing performance data on many aspects of care provided in the acute inpatient hospital setting. For more information on measures reported on *Hospital Compare*, we refer readers to the website at: <http://www.medicare.gov/hospitalcompare>.

Other information that may not be as relevant to or easily understood by beneficiaries and information for which there are unresolved display issues or design considerations are not reported on the *Hospital Compare* website and may be made available on other CMS websites, such as <https://data.medicare.gov>. CMS also provides stakeholders access to archived data from the *Hospital Compare* website, which can be found at: <https://data.medicare.gov/data/archives/hospital-compare>. In the FY 2019

IPPS/LTCH PPS proposed rule (83 FR 20470 through 20471), we did not propose any changes to these policies.

We note that in section VIII.A.10. of the preamble of this final rule, we discuss our efforts to provide stratified data in hospital confidential feedback reports and potentially making stratified data publicly available on the *Hospital Compare* website in the future.

d. Meaningful Measures Initiative and the Hospital IQR Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20470 through 20500), we proposed a number of new policies for the Hospital IQR Program. We developed these proposals after conducting an overall review of the Program under our new “Meaningful Measures Initiative,” which is discussed in more detail in section I.A.2. of the preamble of this final rule. The proposals reflected our efforts to ensure that the Hospital IQR Program measure set continues to promote improved health outcomes for our beneficiaries while minimizing costs, which can consist of several different types of costs, including, but not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submitting/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other federal

and/or State regulations (if applicable). They also reflect our efforts to improve the usefulness of the data that we publicly report in the Hospital IQR Program. Our goal is to improve the usefulness and usability of CMS quality program data by streamlining how providers are reporting and accessing data, while maintaining or improving consumer understanding of the data publicly reported on a *Compare* website.

As part of this review, we stated that we took a holistic approach to evaluating the Hospital IQR Program's current measures in the context of the measures used in the other IPPS quality programs (that is, the Hospital Readmissions Reduction Program, the HAC Reduction Program, and the Hospital VBP Program). We view the value-based purchasing programs together as a collective set of hospital value-based programs. Specifically, we believe the goals of the three value-based purchasing programs (the Hospital VBP, Hospital Readmissions Reduction, and HAC Reduction Programs) and the measures used in these programs together cover the Meaningful Measures Initiative quality priorities of making care safer, strengthening person and family engagement, promoting coordination of care, promoting effective prevention and treatment of illness, and making care affordable—but that the programs should not add unnecessary complexity or costs associated with duplicative measures across programs.

The Hospital Readmissions Reduction Program focuses on care coordination measures, which address the quality priority of promoting effective communication and care coordination within the Meaningful Measures Initiative. The HAC Reduction Program focuses on patient safety measures, which address the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of

care. As part of this holistic quality payment program strategy, we believe the Hospital VBP Program should focus on the measurement priorities not covered by the Hospital Readmissions Reduction Program or the HAC Reduction Program. The Hospital VBP Program would continue to focus on measures related to: (1) the clinical outcomes, such as mortality and complications (which address the Meaningful Measures Initiative quality priority of promoting effective treatment); (2) patient and caregiver experience, as measured using the HCAHPS Survey (which addresses the Meaningful Measures Initiative quality priority of strengthening person and family engagement as partners in their care); and (3) healthcare costs, as measured using the Medicare Spending Per Beneficiary (MSPB) – Hospital measure (which addresses the Meaningful Measures Initiative priority of making care affordable). As part of this larger quality program strategy, we believe the Hospital IQR Program should focus on measure topics not covered in the other programs' measures. Although new Hospital VBP measures will be selected from the measures specified under the Hospital IQR Program, the Hospital VBP Program measure set will no longer necessarily be a subset of the Hospital IQR Program measure set. As discussed in section I.A.2. of the preamble of this final rule, we are engaging in efforts aimed at evaluating and streamlining regulations with the goal to reduce unnecessary costs, increase efficiencies, and improve beneficiary experience. While there may be some overlap between the Hospital IQR Program measure set and the Hospital VBP measure set, allowing removal of duplicative measures from the Hospital IQR Program once they have been adopted into the Hospital VBP Program would further these goals. We believe this framework will allow hospitals and patients to continue to

obtain meaningful information about hospital performance and incentivize quality improvement while also streamlining the measure sets to reduce duplicative measures and program complexity so that the costs to hospitals associated with participating in these programs does not outweigh the benefits of improving beneficiary care.

## 2. Retention of Previously Adopted Hospital IQR Program Measures for Subsequent Payment Determinations

We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53512 through 53513) for our finalized measure retention policy. Pursuant to this policy, when we adopt measures for the Hospital IQR Program beginning with a particular payment determination, we automatically readopt these measures for all subsequent payment determinations unless we propose to remove, suspend, or replace the measures. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20471), we did not propose any changes to this policy.

## 3. Considerations in Expanding and Updating Quality Measures

We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53510 through 53512) for a discussion of the previous considerations we have used to expand and update quality measures under the Hospital IQR Program. In the proposed rule, we did not propose any changes to these policies. We also refer readers to section I.A.2. of the preamble of this final rule, in which we describe the Meaningful Measures quality topics that we have identified as high impact measurement areas that are relevant and meaningful to both patients and providers.

Furthermore, in selecting measures for the Hospital IQR Program, we are mindful of the conceptual framework we have developed for the Hospital VBP Program. Because measures adopted for the Hospital VBP Program must first have been adopted under the Hospital IQR Program and publicly reported on the *Hospital Compare* website for at least one year, these two programs are linked. We view the value-based purchasing programs, including the Hospital VBP Program, as the next step in promoting higher quality care for Medicare beneficiaries by transforming Medicare from a passive payer of claims into an active purchaser of quality healthcare for its beneficiaries.

#### 4. Removal Factors for Hospital IQR Program Measures

##### a. Current Policy

We most recently updated our measure removal and retention factors in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49641 through 49643).<sup>268</sup> The previously adopted removal factors are:

- Factor 1. Measure performance among hospitals is so high and unvarying that meaningful distinctions and improvements in performance can no longer be made (that is, “topped-out” measures): statistically indistinguishable performance at the 75<sup>th</sup> and 90<sup>th</sup> percentiles; and truncated coefficient of variation  $\leq 0.10$ .

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<sup>268</sup> As discussed above, we generally retain measures from the previous year’s Hospital IQR Program measure set for subsequent years’ measure sets except when we specifically propose to remove, suspend, or replace a measure. We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50185) and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50203 through 50204) for more information on the criteria we consider for removing quality measures. We refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49641 through 49643) for more information on the additional factors we consider in removing quality measures and the factors we consider in order to retain measures. We note that in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50203 through 50204), we clarified the criteria for determining when a measure is “topped-out.”

- Factor 2. A measure does not align with the current clinical guidelines or practice.
- Factor 3. The availability of a more broadly applicable measure (across settings, populations, or the availability of a measure that is more proximal in time to desired patient outcomes for the particular topic).
- Factor 4. Performance or improvement on a measure does not result in better patient outcomes.
- Factor 5. The availability of a measure that is more strongly associated with desired patient outcomes for the particular topic.
- Factor 6. Collection or public reporting of a measure leads to negative unintended consequences other than patient harm.
- Factor 7. It is not feasible to implement the measure specifications.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20472), we did not propose to modify any existing removal factors.

**b. New Measure Removal Factor**

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20472), we proposed to adopt an additional factor to consider when evaluating measures for removal from the Hospital IQR Program measure set: Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

As we discuss in section I.A.2. of the preamble of this final rule with respect to our new “Meaningful Measures Initiative,” we are engaging in efforts to ensure that the Hospital IQR Program measure set continues to promote improved health outcomes for

beneficiaries while minimizing the overall costs associated with the program. We believe these costs are multifaceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the program. We have identified several different types of costs, including, but not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submission/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other federal and/or State regulations (if applicable). For example, it may be needlessly costly and/or of limited benefit to retain or maintain a measure which our analyses show no longer meaningfully supports program objectives (for example, informing beneficiary choice or payment scoring). It may also be costly for health care providers to track confidential feedback preview reports and publicly reported information on a measure where we use the measure in more than one program. CMS may also have to expend unnecessary resources to maintain the specifications for the measure, as well as the tools needed to collect, validate, analyze, and publicly report the measure data. Furthermore, beneficiaries may find it confusing to see public reporting on the same measure in different programs.

When these costs outweigh the evidence supporting the continued use of a measure in the Hospital IQR Program, we believe it may be appropriate to remove the measure from the Program. Although we recognize that one of the main goals of the Hospital IQR Program is to improve beneficiary outcomes by incentivizing health care providers to focus on specific care issues and making public data related to those issues, we also recognize that those goals can have limited utility where, for example, the publicly reported data (including payment determination data) are of limited use because they cannot be easily interpreted by beneficiaries to influence their choice of providers. In these cases, removing the measure from the Hospital IQR Program may better accommodate the costs of program administration and compliance without sacrificing improved health outcomes and beneficiary choice.

We proposed that we would remove measures based on this factor on a case-by-case basis. We might, for example, decide to retain a measure that is burdensome for health care providers to report if we conclude that the benefit to beneficiaries justifies the reporting burden. Our goal is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients.

We refer readers to section VIII.A.5.b. of the preamble of this final rule, where we discuss our proposals to remove a number of measures based on this proposed removal factor.

Comment: The majority of commenters expressed support for the adoption of the new measure removal Factor 8, “the costs associated with a measure outweigh the benefit of its continued use in the program.” Many of these commenters supported the adoption of removal Factor 8 because they believe this factor will support efforts to ensure that the Hospital IQR Program measure set continues to promote improved health outcomes for our beneficiaries while reducing administrative and other program-related costs. Some commenters also expressed support for removal Factor 8 because it aligns with CMS’ goal of moving the program forward in the least burdensome manner possible, while maintaining a parsimonious set of meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients. Other commenters expressed support for removal Factor 8 because it simplifies how providers are reporting and accessing data. Several commenters stated that the new measure removal factor is a long overdue addition to the program.

A number of commenters supported the adoption of removal Factor 8 because it would allow for the removal of inappropriately burdensome measures, and noted that costs are an important factor to consider when evaluating measures for removal from the Hospital IQR Program measure set. Other commenters appreciated that CMS has identified costs beyond those associated with data collection and submission as part of its evaluation of measures under this new removal factor.

Numerous commenters supported the adoption of removal Factor 8 because it would allow for the removal of measures with limited utility, such as measures that do not support program objectives of informing beneficiary decision-making and improving

hospital quality of care, as well as for the removal of duplicative measures contained in multiple quality programs.

Response: We thank these commenters for their support.

Comment: Many commenters who supported the adoption of removal Factor 8 also encouraged CMS to provide additional information and transparency in this final rule on how it intends to evaluate the costs and benefits associated with a measure proposed for removal, including the criteria used in assessing costs, the nature of the burden that the removal of a measure relieves, and the methods used to assess whether the costs associated with a measure outweigh the benefits of its continued use in the program. Some of those commenters stated that costs and benefits can be difficult to define and that various stakeholders may have different perspectives on the costs and benefits of measures.

Response: We agree with commenters that various stakeholders may have different perspectives on how to define costs as well as benefits. Because of these challenges, we intend to evaluate each measure on a case-by-case basis, while considering input from a variety of stakeholders, including, but not limited to: patients, caregivers, patient and family advocates, providers, provider associations, healthcare researchers, healthcare payers, data vendors, and other stakeholders with insight into the direct and indirect benefits and costs, financial and otherwise, of maintaining the specific measure in the Hospital IQR Program. We note that we intend to assess the costs and benefits to all program stakeholders, including but not limited to, those listed above and provide a robust discussion of these costs and benefits in the proposed rules. We further

note that our assessment of costs and benefits is not limited to a strictly quantitative analysis.

Comment: A few commenters requested clarification on whose benefit is being considered when evaluating whether “the costs associated with the measure outweigh the benefit of its continued use in the program.”

Response: We intend to balance the costs with the benefits to a variety of stakeholders. These stakeholders include, but are not limited to, patients and their families or caregivers, providers, the healthcare research community, healthcare payers, and patient and family advocates. We also believe that while a measure’s use in the Hospital IQR Program may benefit many entities, a key benefit is to patients and their caregivers through incentivizing the provision of high quality care and through providing publicly reported data regarding the quality of care available. For each measure, the relative benefit to each stakeholder may vary; thus, we believe that the benefits to be evaluated for each measure are specific to the measure itself and the original rationale for including the measure in the program.

Comment: A few commenters urged CMS to develop a standardized evaluation and scoring system with significant multi-stakeholder input, to ensure that Factor 8 appropriately balances the needs of all healthcare stakeholders. One commenter further recommended that CMS convene a set of working groups in order to consider input from the provider community.

Response: While we do not currently plan to develop a standardized evaluation and scoring system for use of Factor 8, we value transparency in our processes, and

continually seek input from multiple stakeholders through outreach and education efforts, such as through webinars, national provider calls, stakeholder listening sessions, as well as through rulemaking and other collaborative engagements with stakeholders. We will continue to do so in the future when proposing measures for adoption or removal from the Hospital IQR Program. Further, preliminary input from stakeholders on data collection and reporting burden was instrumental in deriving the newly proposed removal factor. As discussed above, the removal of measures under Factor 8 will function as a balancing test between the cost of ongoing maintenance, reporting/collection, and public reporting against the benefits associated with reporting that data. We intend to consider the costs and benefits to all program stakeholders. Furthermore, we intend to take multiple sources of evidence into account when proposing to remove measures under any of the removal factors and always welcome stakeholder input.

Comment: Many commenters recommended that CMS consider additional types of costs and benefits under Factor 8, including:

- Insights from stakeholders, including patients and providers, on costs and benefits, as well as potential unintended consequences of removal (such as a decline in performance, particularly if the measure would not be captured in any of the other IPPS programs);
- Benefits of consistent measure sets;
- Multiple methods of data collection and reporting;
- Costs associated with designing, developing, and implementing a measure;

- Costs associated with updating clinical processes and workflows to adapt to an updated measure set;
  - Providers' costs to contract with vendors for data collection or reporting;
  - Development and implementation of processes to perform well on the measure;
- and
- Whether measure implementation adds or duplicates tasks within provider processes.

Response: We note that in our proposal to adopt this measure removal factor (83 FR 20472), we stated that we will evaluate costs and benefits on a case-by-case basis and identified several types of costs to provide examples of costs which we would consider in our evaluation. We noted that these costs include, but are not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submitting/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including maintenance and public display; and/or (5) the provider and clinician cost associated with compliance with other federal and/or State regulations (if applicable). This was not intended to be a complete list of the potential types of costs to consider in evaluating measures.

We also understand that while a measure's use in the Hospital IQR Program may benefit many entities, the primary benefit is to patients and caregivers through incentivizing the provision of high quality care and through providing publicly reported data regarding the quality of care available. One key aspect of patient benefits is assessing the improved beneficiary health outcomes if a measure is retained in our measure set. We believe that these benefits are multifaceted, and are illustrated through the domains of the Meaningful Measures Initiative. When the costs associated with a measure outweigh the evidence supporting the benefits to patients with the continued use of a measure in the Hospital IQR Program we believe it may be appropriate to remove the measure from the program.

We appreciate commenters' suggestions for other types of costs and benefits to consider when evaluating the costs and benefits of each measure on a case-by-case basis under measure removal Factor 8, and will take these into consideration for future years.

Comment: One commenter believed that cost assessments should not only consider the reporting method (for example, eCQMs, claims-based) but also whether a more efficient alternative is available to collect the performance data.

Response: We agree with the commenter that it is useful to consider whether a more efficient alternative is available to collect performance data and believe it would be appropriate to consider this in our evaluation of measures under measure removal Factor 8. We will also consider the value of longer term efficiencies when evaluating costs, such as the costs associated with creating and sustaining EHR-based measures like eCQMs.

Comment: A few commenters encouraged CMS to not remove measures simply because a previously finalized measure was too difficult to implement, thereby creating a gap in the measure set, but rather to attempt to identify ways to gather the appropriate data by different means.

Response: We note that it is not our intent to remove measures solely based on ease of implementation. Further, implementation concerns are something we take into account when proposing to adopt a measure. As discussed above, the removal of measures under the newly proposed Factor 8 will serve to balance the costs of ongoing maintenance, reporting/collection, and public reporting with the benefit associated with reporting that data, including the benefits to patients and their caregivers through incentivizing the provision of high quality care by providing publicly reported data regarding the quality of care available. We continually seek ways to improve the Hospital IQR Program measure set, including through identification of more efficient means of capturing data.

Comment: A few commenters recommended that any measures removed under Factor 8 be replaced by comparable or better measures in the same domain, such as measures that are more outcomes-oriented or easier to implement.

Response: Retaining a strong measure set that addresses critical quality issues is one benefit that we would consider in evaluating whether a measure should be potentially removed from the Hospital IQR Program measure set.

Comment: One commenter observed that many hospitals do not review feedback reports because these hospitals track quality improvement using internal systems, and therefore this cost should not be considered in a cost analysis of measures.

Response: We recognize that not all providers review the feedback reports provided through our quality reporting programs. However, a majority of providers do view and download these reports (for example, in May 2018, over 83 percent of hospitals downloaded their Hospital IQR Program hospital-specific reports for claims-based outcome measures, as tracked by our QualityNet system) in addition to their internally generated feedback reports. Therefore, we continue to believe that it is important to consider this as one cost of continued use of the measure in the Hospital IQR Program. We note that the cost of reviewing feedback reports is only one example of the costs that may be associated with a measure. We will continue to consider this cost among the other costs of a measure's continuing use in the Hospital IQR Program.

Comment: One commenter requested that CMS perform an impact analysis before finalizing the addition of removal Factor 8, particularly to take into consideration the impact of measure removals on safety-net providers, and for CMS to consider a stop-loss policy if the financial impact of these changes results in a larger than a 10 percent reduction in performance payments each year. Another commenter recommended that CMS publish annual assessments to determine how quality measures from CMS have impacted patient care and clinical outcomes.

Response: We intend to evaluate the costs and benefits of potentially removing any measure from the Hospital IQR Program under removal Factor 8 on a case-by-case

basis. In our evaluation of costs and benefits, we intend to evaluate the effects on providers, including safety-net providers, of retaining or removing the measure from the Hospital IQR Program, as well as the effects on patients and their caregivers with regards to access to publicly reported data regarding the quality of care available. We do not believe that an impact analysis on whether or not to adopt the measure removal factor itself is necessary because of our intent to apply it through a case-by-case evaluation that will take into account various considerations of costs and benefits to multiple stakeholders as described above, as well as the circumstances and facts unique to a given measure.

Comment: A commenter expressed support for the simplification resulting from removing duplicative measures used in multiple quality programs, but noted that such removals would not result in provider cost reduction because hospitals would still be required to monitor those measures retained in another quality program.

Response: We recognize that hospitals would still be required to monitor measures removed from one program, but retained in another quality program. However, we believe that simplification benefits will be gained by hospitals that have been reviewing their multiple reports and will no longer be required to identify discrepancies in reporting and identify whether those discrepancies are due to differing measure specifications or due to a CMS measure calculation error. Furthermore, we believe this simplification will benefit patients and caregivers who view measure results information on the *Hospital Compare* website because they will be less likely to be confused if they

see slightly different measure results for the same measures for the same hospital but through multiple programs.

Comment: Many commenters did not support the adoption of removal Factor 8. Several commenters did not support the adoption of removal Factor 8 due to the perceived lack of transparency on the methods or criteria that would be used to assess the costs and benefits associated with a measure. A number of commenters asserted that the assessment of value should also include a clear prioritization of the needs of patients.

Response: We wish to clarify that it is not our intent to remove measures that continue to benefit patients or providers solely because these measures incur administrative costs to CMS or to others. We will be transparent in our assessment of measures under this measure removal factor. As described above, there are various considerations of costs and benefits, direct and indirect, financial and otherwise, that we will evaluate in applying removal Factor 8, and we will take into consideration the perspectives of multiple stakeholders. However, because we intend to evaluate each measure on a case-by-case basis, and each measure has been adopted to fill different needs of the Hospital IQR Program, we do not believe it would be meaningful to identify a specific set of assessment criteria to apply to all measures.

In addition, we note that the benefits we will consider center around benefits to patients and caregivers as the primary beneficiaries of our quality reporting and value-based payment programs. When we propose a measure for removal under this measure removal factor, we will provide information on the costs and benefits we considered in evaluating the measure. We continue to monitor and evaluate our programs to identify

their benefit with respect to quality of care and patient safety as well as their costs with respect to provider burden, potentially contradictory public information for beneficiaries to analyze in their decision making, and measure maintenance. When our analyses indicate that a measure's costs outweigh the benefit of continuing to use the measure in the program, we will propose to remove that measure through notice and comment rulemaking.

Comment: A few commenters believed that the existing seven factors are sufficient for determining whether it is appropriate to remove a measure.

Response: While we acknowledge that there are seven factors currently adopted that may be used for considering measure removal from the Hospital IQR Program, we believe the proposed new measure removal factor adds a new criterion that is not captured in the other seven factors. The proposed new measure removal factor will help advance the goals of the Meaningful Measures Initiative, which aims to improve outcomes for patients, their families, and health care providers while reducing burden and costs for clinicians and providers.

Comment: A number of commenters expressed the concern that the benefits associated with a measure proposed for removal would be determined based solely on the cost reductions associated with reduced administrative burden for hospitals. Several commenters also expressed concern that Factor 8 could result in the removal of measures based solely on cost reductions to providers and/or CMS, and thus not consider or prioritize patient perspectives. One commenter urged CMS to prioritize the needs of patients and consumers when assessing the benefits of a measure under Factor 8, by

taking into consideration the public's right to quality and cost transparency, as well as consumers' reliance on publicly available information to make important healthcare decisions. Another commenter expressed the concern that costs are typically imposed on providers while benefits are rendered to beneficiaries, and therefore does not believe that costs and benefits can be compared.

Response: As described above, there are various considerations of costs and benefits, direct and indirect, financial and otherwise, that we will evaluate in applying removal Factor 8, and we will take into consideration the perspectives of multiple stakeholders. We intend to apply measure removal Factor 8 on a case-by-case basis because the costs and benefits associated with each measure are unique to that measure. We agree with the commenter that while a measure may contribute costs to many entities, providers do bear the primary cost of participation in Hospital IQR Program. However, we will assess the costs to all stakeholders, including but not limited to, patients, caregivers, providers, CMS, and other entities, in determining whether to propose removal of a measure under Factor 8. We also agree that while a measure's use in the Hospital IQR Program may benefit many entities, the primary benefit is to patients and their caregivers through incentivizing the provision of high quality care and through providing publicly reported data regarding the quality of care available. We also believe that the benefits of measures can include benefits for all stakeholders, including but not limited to, patients, caregivers, providers, CMS, advocacy organizations, healthcare researchers, healthcare purchasers, and others. We intend to identify the relevant

stakeholders and assess both costs and benefits to these stakeholders in our assessment of each measure.

Comment: Some commenters expressed concern that this measure removal factor could allow providers to recommend removal of measures they do not support based on the argument that these measures are costly.

Response: We agree that it is possible that providers may recommend removal of measures they do not support based on the argument that these measures are costly. However, input from providers is only part of our case-by-case evaluation of measures. We also intend to consider input from other stakeholders, including patients, caregivers, advocacy organizations, healthcare researchers, healthcare purchasers, and other parties as appropriate to each measure. We will weigh input we receive from all stakeholders with our own analysis of each measure to make our case-by-case determination of whether it would be appropriate to remove a measure based on its costs outweighing the benefit of its continued use in the program.

Comment: A few commenters expressed concern that the lack of references to patient considerations in the proposed rule appeared to suggest that this measure removal factor does not take into account the value of a measure to beneficiaries, and noted that the Factor 8 does not appear to include the following benefits associated with patient perspectives:

- Saving lives;
- Ensuring high quality care;
- Ensuring patient safety; and

- Facilitating consumer access to information.

Response: We intend to consider all benefits of measure, similar to our intent to consider all costs, when assessing whether the costs outweigh the benefits of the measure's continued use in the Hospital IQR Program. The likelihood of a measure to significantly improve patient well-being is a non-quantifiable benefit that would be weighed against potential costs to ensure that measures that save lives and ensure patient safety are retained when appropriate. We agree with the commenters that these benefits are all potential benefits associated with a measure's continued use in the Hospital IQR Program and will continue to consider these and other benefits in our evaluations.

Comment: A few commenters urged CMS to retain measures that, while costly or burdensome, hold value to beneficiaries, because in these cases the benefits would justify the cost. A few commenters noted certain measures of value to beneficiaries, such as measures that continuously monitor the aspects of care quality that are deemed essential to high-quality patient care or have serious consequences if done poorly. Some of these commenters further recommended that measures of such value to beneficiaries should never be removed from quality programs, even if they are topped-out.

Response: We appreciate the commenters' feedback. We intend to consider all benefits of a measure, including the ability of a measure to promote patient safety and experience, when assessing whether the costs outweigh the benefits of the measure's continued use in the Hospital IQR Program.

Comment: One commenter questioned how measures that were not too costly to implement could now be too costly to maintain in the program. Another commenter

asserted the value of measures is self-evident in their initial adoption, and that the removal of any measure would thereby decrease the ability of that measure to improve patient care and reduce Medicare costs, and concluded that the removal of a measure, by definition, would decrease the effectiveness of the program itself.

Response: There are several ways that a measure for which the benefit once outweighed costs may now have the costs outweigh its benefit. As one example, measures that incentivize providers to update clinical workflows or adopt specific infrastructure may become less beneficial over time as an increasing number of providers adopt the appropriate processes into their workflows and performance approaches or reaches topped-out status. Under this example, the measure was highly beneficial upon adoption but may become less beneficial as it incentivizes a smaller number of providers. Therefore, such measures may still cost the same, but because of their now reduced benefit these costs may now outweigh the benefit of continuing to maintain and require reporting on these measures.

We also disagree with the assertion that removing measures from the program inherently decreases the effectiveness of the program itself. We believe one of the Hospital IQR Program's primary benefits to patients and the public is its ability to collect and publicly report data for patients to use in making decisions about their care. We further believe maintaining an unnecessarily large or complicated measure set including measures that are not meaningful to patients hampers the program's effectiveness at presenting valuable data in a useful or usable manner. For this reason, we believe it is in the interest of patients for the Hospital IQR Program to ensure an individual measure

continues to benefit patients. Furthermore, we note that removal of such measures would free up CMS programmatic resources to focus on other priority measures or areas of the Hospital IQR Program.

Comment: A few commenters expressed concern that this factor is not supported by scientific criteria.

Response: We believe it is important to adequately weigh the potential benefits of a measure in determining whether the costs outweigh those benefits. However, we disagree that this can only be achieved by applying scientific criteria. We believe that an appropriate measure set for a specific program is achieved by applying a balanced set of factors and taking into consideration the potential impact to multiple stakeholders to ensure that each measure serves a purpose in the program, and this is one element of that set of factors.

After consideration of the public comments we received, we are finalizing our proposal to adopt measure removal Factor 8, “the costs associated with a measure outweigh the benefit of its continued use in the program,” beginning with the effective date of the FY 2019 IPPS/LTCH PPS final rule as proposed.

#### 5. Removal of Hospital IQR Program Measures

We refer readers to section VIII.A.4. of the preamble of this final rule for a discussion of our current and proposed measure removal criteria. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20472 through 20485), we proposed to remove a total of 39 measures from the Hospital IQR Program across the FYs 2020, 2021, 2022,

and 2023 payment determinations. In this final rule, we are finalizing removal of all 39 of those measures with some modification as discussed below.

a. Removal of Measure – Removal Factor 4, Performance or Improvement on a Measure Does Not Result in Better Patient Outcomes: Hospital Survey on Patient Safety Culture

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20473), we proposed to remove the Hospital Survey on Patient Safety Culture measure beginning with the CY 2018 reporting period/FY 2020 payment determination based on removal Factor 4, “performance or improvement on a measure does not result in better patient outcomes.” The Hospital Survey on Patient Safety Culture measure was adopted in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49662 through 49664) for the FY 2018 payment determination and subsequent years, to allow us to assess whether and which patient safety culture surveys were being utilized by hospitals and the frequency of their use. In that rule, we stated our belief that this would be a time-limited measure that would assist us in assessing the feasibility of implementing a single survey on patient safety culture in the future (80 FR 49661). When we adopted the measure, we acknowledged that we had not yet determined for how many years we would keep the measure in the Hospital IQR Program (80 FR 49664). By design, this structural measure does not provide information on patient outcomes, because hospitals are asked only whether they administer a patient safety culture survey, and therefore, does not result in better patient outcomes, removal Factor 4.

Our data indicate that 98 percent of hospitals have reported they use some version of a patient safety culture survey; a large majority of hospitals (69.6 percent) that

reported on the measure for the CY 2016 reporting period/FY 2018 payment determination use the AHRQ Surveys on Patient Safety Culture (SOPS).<sup>269</sup> While we proposed to remove this measure, the data already collected would still help inform consideration of a potential future patient safety culture measure for the Hospital IQR Program. However, at this time, we believe that the burden of reporting this measure outweighs the benefits of continued data collection. Therefore, we proposed to remove the Hospital Survey on Patient Safety Culture measure for the CY 2018 reporting period/FY 2020 payment determination (for which the data submission period is April 1, 2019 through May 15, 2019) and subsequent years.

Comment: A majority of commenters supported CMS' proposal to remove the Hospital Survey on Patient Safety Culture measure from the Hospital IQR Program beginning with the CY 2018 reporting period/FY 2020 program year. One commenter specifically noted its opinion that collecting, analyzing, and reporting data on this measure is burdensome. A few commenters stated their belief the measure no longer has value. Another commenter supported removal of the Hospital Survey on Patient Safety Culture measure, but recommended CMS evaluate opportunities to adopt another measure that utilizes the data gathered under this survey, as opposed to the current structural measure.

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<sup>269</sup> The Agency for Healthcare Research and Quality (AHRQ) sponsored the development of patient safety culture assessment tools for various healthcare organizations which assess patient safety culture in a health care setting. Patient safety culture is the extent to which an organization's culture supports and promotes patient safety. The survey tools are measured by what is rewarded, supported, and accepted, expected, and accepted in an organization as it relates to patient safety. (<https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/index.html>).

Response: We thank the commenters for the support. While we continue to believe that patient safety culture is an important topic for hospitals, as a structural measure, this particular measure no longer meets the needs of the Hospital IQR Program. We appreciate the commenter's suggestion and we intend to evaluate opportunities to adopt another non-structural measure utilizing the data gathered under this survey.

Comment: A number of commenters did not support CMS' proposal to remove the Hospital Survey on Patient Safety Culture measure from the Hospital IQR Program beginning with the CY 2018 reporting period/FY 2020 program year. Several commenters expressed concern that removing this measure would encourage hospitals to stop assessing patient safety culture, whereas requiring the measure incentivizes hospitals to improve their patient safety culture, and asserted their belief that there is a strong correlation between safety culture assessment and improved clinical outcomes.

Response: We acknowledge commenters' concerns that some hospitals might stop assessing patient safety culture; however, we believe most hospitals are committed to assessing and improving their patient safety culture and will continue to survey employees regarding patient safety culture. Our data indicate that 98 percent of hospitals use some version of a patient safety culture survey, such that no further incentive is required to encourage hospitals to implement patient safety culture surveys.

Comment: Despite opposing the removal of the hospital survey on patient safety culture, one commenter acknowledged that these surveys have become a part of routine operational assessments and expressed their belief that most organizations will continue to conduct the survey regardless of whether it is required by the Hospital IQR Program.

Another commenter asserted that requiring the measure allows for meaningful comparisons between hospitals. A third commenter expressed their belief that CMS should prioritize patient safety culture, and further stated that surveys are the most effective means of capturing hospital employees' feedback on the safety culture.

Response: We agree with commenters that assessing patient safety culture has become a routine part of operational safety assessments, and further agree that surveys can be an effective way of capturing employee feedback on a hospital's patient safety culture. We therefore believe that hospitals will continue to survey their employees about patient safety culture after this measure is removed from the Hospital IQR Program.

However, we disagree that the measure allows for meaningful comparisons between hospitals due to its design as a structural measure. The Hospital Survey on Patient Safety Culture measure does not collect data on either a hospital's survey results or those results' impact on patient safety outcomes. As a result, comparisons between hospitals on this measure only inform the public about whether or not hospitals use a patient safety culture survey. Because the data indicate 98 percent of hospitals are now administering patient safety culture surveys, we believe continuing to collect and publicly report this data does not capture information that will incentivize specific improvements for hospitals or provide valuable information for use by patients in making decisions about where to seek care. Therefore, we do not believe continuing to collect—or, conversely, ceasing to collect—data under this measure will assess or affect the patient safety culture within hospitals.

Comment: A number of commenters suggested refining the measure instead of removing it. One commenter highlighted that there are a variety of methods to survey and report data that allow hospitals to use a mechanism that minimizes burden while generating important information to manage patient safety culture. Another commenter recommended modifying the measure to reflect a more meaningful measure of actions taken to promote a strong patient safety culture, or modifying the measure to have hospitals report scores on a particular safety culture domain that is consistent across safety culture surveys. A third commenter suggested implementing this measure as an outcomes measure instead of a structural measure. Another commenter recommended that the survey be conducted bi-annually rather than annually because hospital safety culture can be slow to change.

Response: We appreciate commenters' recommendations regarding potential refinements to this measure. We agree that patient safety cultures generally do not change overnight. While we are finalizing removal of this measure, we believe the data already collected could help inform consideration and/or development of a potential future patient safety culture measure that might assess patient safety culture in more detail, as commenters recommended. We will therefore take these recommendations into consideration for future measure development.

After consideration of the public comments we received, we are finalizing removal of the Hospital Survey on Patient Safety Culture from the Hospital IQR Program measure set beginning with the CY 2018 reporting period/FY 2020 payment determination as proposed.

b. Removal of Measures – Removal Factor 8, The Costs Associated with a Measure Outweigh the Benefit of its Continued Use in the Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20473 through 20484), we proposed to remove a number of measures under our proposed new removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program, across the FYs 2020, 2021, 2022, and 2023 payment determinations. These proposals are presented by measure type: (1) structural measure: Safe Surgery Checklist Use; (2) patient safety; (3) claims-based readmission; (4) claims-based mortality; (5) hip/knee complications; (6) Medicare Spending Per Beneficiary (MSPB) – Hospital (NQF #2158); (7) clinical episode-based payment; (8) chart-abstracted clinical process of care; and (9) eCQMs. These are discussed in detail below.

(1) Structural Measure: Safe Surgery Checklist Use

We refer readers to the FY 2013 IPPS/LTCH PPS final rule where we adopted the Safe Surgery Checklist Use measure (77 FR 53531 through 53533). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20473 through 20474), we proposed to remove the Safe Surgery Checklist Use measure beginning with the CY 2018 reporting period/FY 2020 payment determination under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

We refer readers to section VIII.A.4.b. of the preamble of the proposed rule, where we acknowledge that costs are multi-faceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the program. For example, we believe it may be unnecessarily costly for

health care providers to report a measure for which our analyses show that there is no meaningful difference in performance or there is little room for continued improvement.

Based on our review of reported data on this measure, there is no meaningful difference in performance or there is little room for continued improvement. Our analysis is captured by the table below:

<b>Payment Determination</b>	<b>Encounters</b>	<b>Number of Hospitals</b>	<b>Rate</b>	<b>75<sup>th</sup> Percentile</b>	<b>90<sup>th</sup> Percentile</b>	<b>Truncated COV</b>
FY 2017	CY 2015 Q1-Q4	3,201	0.961	100.00	100.00	0.201
FY 2018	CY 2016 Q1-Q4	3,195	0.968	100.00	100.00	0.181

Based on the analysis above, the national rate of “Yes” response for this measure is nearly 1.0, or 100 percent, nationwide, and has remained at this level for the last two years, such that there is no distinguishable difference in hospital performance between the 75<sup>th</sup> and 90<sup>th</sup> percentiles. In addition, the truncated coefficient of variation (COV) has decreased such that it is trending towards 0.10. Our analysis indicates that performance on this measure is trending towards topped-out status, that is to say, safe surgery checklists for surgical procedures are widely in use and there is little room for improvement on this structural measure.

In addition, we believe this measure is of more limited utility for internal hospital quality improvement efforts. This structural measure of hospital process determines whether a hospital utilizes a safe surgery checklist that assesses whether effective communication and safe practices are performed during three distinct perioperative periods. For the measure, hospitals indicate by “Yes” or “No” whether or not they use a

safe surgery checklist for surgical procedures that includes safe surgery practices during each of the aforementioned perioperative periods. The measure does not require a hospital to report whether it uses a checklist in connection with each individual inpatient procedure.

Furthermore, removal of this measure would alleviate burden to hospitals associated with reporting on this measure. We anticipate a reduction in information collection burden because reporting on this measure takes hospitals approximately two minutes each year (77 FR 53666). As such, we believe the costs associated with reporting on this measure outweigh the associated benefits of keeping it in the Hospital IQR Program because it no longer meaningfully supports the Program objective of informing beneficiary choice since safe surgery checklists are widely in use.

Therefore, we proposed to remove the Safe Surgery Checklist Use measure beginning with the CY 2018 reporting period/FY 2020 payment determination, for which the data submission period is April 1, 2019 through May 15, 2019, under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We also refer readers to the CY 2018 OPSS/ASC PPS final rule in which the Hospital Outpatient Quality Reporting (OQR) and Ambulatory Surgical Center Quality Reporting (ASCQR) Programs finalized removal of the Safe Surgery Checklist Use measure beginning with the CY 2018 reporting period/CY 2020 payment determination for the Hospital OQR Program and with the CY 2019 payment determination for the ASCQR Program (82 FR 52363 through 52364; 82 FR 52571 through 52572; and 82 FR 52588 through 52589).

Comment: Many commenters supported CMS' proposal to remove the Safe Surgery Checklist Use measure from the Hospital IQR Program beginning with the CY 2018 reporting period/FY 2020 payment determination. A few commenters specifically supported CMS' position that the cost of collecting and reporting data under the measure outweighs the benefit of retaining it in the Hospital IQR Program. Other commenters noted that the measure's nature as a structural measure hinders its ability to provide data on whether the communication among surgical team members was effective in translating anticipated critical events or improving patient outcomes.

One commenter stated that while there is value in ensuring quality communication during critical phases of the surgical patient experience, the high level of compliance for this measure strongly suggests that the measure is deeply embedded in clinical workflows and processes, leaving little to be gained from continued reporting of the measure. The commenter agreed that use of a safe surgery checklist has been widely adopted by hospitals, but asserted that there is little evidence demonstrating that the measure provides educational opportunities for improving the ongoing competency of surgical teams regarding patient harm prevention. The commenter asserted that education aimed at reducing near-miss events has been proven to be effective and recommended that CMS revisit and refine the measure criteria to ensure that it requires education to be provided and to demonstrate improved communication ongoing surgical team competency.

Response: We thank commenters for their support. We agree that the high level of compliance for this measure strongly suggests that safe surgery checklist use is deeply

embedded in clinical workflows and processes, indicating there is little room for improvement under the current measure. We also appreciate commenters' recommendations for future measures of perioperative communication, and will take these into consideration for future years.

Comment: A number of commenters opposed CMS' proposal to remove the Safe Surgery Checklist Use measure from the Hospital IQR Program beginning with the CY 2018 reporting period/FY 2020 payment determination. A few commenters expressed their concern about the potential adverse impact removing this measure might have on patient care, asserting that hospitals may stop using safe surgery checklists if the measure is removed. One commenter asserted that the potential negative impact of removal outweighs any projected benefit associated with no longer collecting the information, and recommended that the measure be kept as a reminder to the surgical community to practice good communication in the operating room. Another commenter asserted that the rate of "never events" occurring in hospitals indicates the measure is not topped out, and further expressed their concern that many hospitals may only use safe surgery checklists in a cursory or rote manner. The commenter therefore recommended that CMS ensure never events and wrong site surgeries be adequately monitored through another IPPS quality program to avoid negative patient outcomes before removing the Safe Surgery Checklist Use measure. Another commenter recommended that CMS delay removing the measure until use of a safe surgery checklist has been added as a Condition of Participation for hospitals.

Response: While we understand commenters' position that retaining the measure may add some value to the program, we would like to make clear that high performance on the Safe Surgery Checklist Use measure is not intended to indicate whether perioperative communication among surgical team members is effective. This measure is not specified to assess the effectiveness of a team's communication, only whether a safe surgery checklist is used. Therefore, we do not believe continuing to collect *or* ceasing to collect data under this measure will assess or affect the effectiveness of perioperative communication within hospitals. As a result, we believe the administrative burden to hospitals associated with collecting and reporting this data to CMS outweighs the benefit of publicly reporting this data. We will also take commenters' recommendations regarding updates to the Conditions of Participation and monitoring of never-events into consideration as we continue to implement the Meaningful Measures initiative across CMS' quality programs.

Comment: One commenter recommended that for measures on which providers continually have high scores, CMS should improve the measures instead of removing them from the Hospital IQR Program entirely.

Response: We appreciate the recommendation to revise this measure and will take this into consideration as we continue to develop and refine measures for the Hospital IQR Program.

After consideration of the public comments we received, we are finalizing removal of the Safe Surgery Checklist Use measure from the Hospital IQR Program

measure set beginning with the CY 2018 reporting period/FY 2020 payment determination as proposed.

## (2) Patient Safety Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20474 through 20475), we proposed to remove the Patient Safety and Adverse Events Composite<sup>270</sup> (PSI 90) beginning with the CY 2018 reporting period/FY 2020 payment determination and five National Health and Safety Network (NHSN) hospital-acquired infection (HAI) measures beginning with the CY 2019 reporting period/FY 2021 payment determination under the proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

In this final rule, we wish to clarify that our proposals in the FY 2019 IPPS/LTCH PPS proposed rule, and ultimately, our finalized policy as discussed below, to remove these measures from the Hospital IQR Program will not end or otherwise interfere with collection or public reporting of these data. The HAI data will continue to be made publicly available on a quarterly basis and the PSI 90 data on an annual basis in a consumer-friendly manner on the *Hospital Compare* website and through downloadable files under the HAC Reduction Program. We refer readers to section IV.J.4.h. of the preamble of this final rule where this is discussed in the HAC Reduction Program. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting these data, as discussed further below in our responses to comments received.

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<sup>270</sup> We note that measure stewardship of the recalibrated version of the Patient Safety and Adverse Events Composite (PSI 90) is transitioning from AHRQ to CMS and, as part of the transition, the measure will be referred to as the CMS Recalibrated Patient Safety Indicators and Adverse Events Composite (CMS PSI 90) when it is used in CMS quality programs.

(a) Removal for CY 2018 reporting period/FY 2020 payment determination -- Patient Safety and Adverse Events Composite (PSI 90) (NQF #0531) (adopted at 73 FR 48602, refined at 81 FR 57128 through 57133)

We proposed to remove the PSI 90 measure beginning with the FY 2020 payment determination (which would use a performance period of July 1, 2016 through June 30, 2018). As the PSI 90 measure is a claims-based measure, it uses claims and administrative data to calculate the measure without any additional data collection from hospitals. Thus, operationally, we would be able to remove the PSI 90 measure sooner than the NHSN HAI measures. Our reasons for proposing to remove this measure are discussed further below.

(b) Removals for the CY 2019 reporting period/FY 2021 payment determination

- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717) (adopted at 76 FR 51630 through 51631);

- National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138) (adopted at 76 FR 51616 through 51618);

- National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139) (adopted at 75 FR 50200 through 50202);

- National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-Resistant *Staphylococcus Aureus* Bacteremia (MRSA) Outcome Measure (NQF # 1716) (adopted at 76 FR 51630); and
- American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure (NQF #0753) (Colon and Abdominal Hysterectomy SSIs) (adopted at 75 FR 50200 through 50202).

We proposed to remove the CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI measures from the Hospital IQR Program beginning with the CY 2019 reporting period/FY 2021 payment determination. These measures would remain in the Hospital IQR Program until that time, and their reporting would still be tied to FY 2019 and FY 2020 payment determinations under the Hospital IQR Program. Although we proposed to remove these measures from the Hospital IQR Program, we did not propose to remove them from the HAC Reduction Program, and they will continue to be tied to the payment adjustment under that program (section IV.J.1. of the preamble of the proposed rule). After removal from the Hospital IQR Program, these measures would continue to be reported on the *Hospital Compare* website under the public reporting requirements of the HAC Reduction Program. We proposed to remove these measures beginning with the FY 2021 payment determination because hospitals already would have collected and reported data for the first three quarters of the CY 2018 reporting period for the FY 2020 payment determination by the time of publication of the FY 2019 IPPS/LTCH PPS final rule. Removing these five NHSN HAI

measures in the proposed timeline would allow us to use the data already reported by hospitals in the CY 2018 reporting period for purposes of the FY 2020 payment adjustment.

We proposed to remove these six patient safety measures under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We believe that removing the PSI 90, CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures from one program would eliminate development and release of duplicative and potentially confusing CMS confidential feedback reports provided to hospitals across multiple hospital quality and value-based purchasing programs. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. Health care providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used across multiple programs. Hospitals currently review multiple feedback reports for the NHSN HAI measures from three different hospital quality programs that use three different reporting periods, which result in interpreting slightly different measure rates for the same measures (under the Hospital IQR Program, a rolling four quarters of data are used to update the *Hospital Compare* website; under the Hospital VBP Program, 1-year periods are used for each of the baseline period and the

performance period; and under the HAC Reduction Program, a 2-year performance period is used). Beneficiaries may also find it confusing to see public reporting on the same measures in different programs. In addition, maintaining the specifications for the measures, as well as the tools we need to collect, validate, analyze, and publicly report the measure data result in costs to CMS.

We stated in the proposed rule that we believe the costs as discussed above outweigh the associated benefit to maintaining these measures in multiple programs, because that information can be captured through inclusion of these measures in the HAC Reduction Program. Although we are finalizing our proposals to remove these six patient safety measures from the Hospital IQR Program, we continue to recognize that improving patient safety and reducing NHSN HAIs is a critical quality area for which continued progress and improvement is needed, and that patient safety should be a high priority focus of quality programs. For these reasons, and as discussed below, we will continue to use these measures in the HAC Reduction Program and we will not finalize their removal from the Hospital VBP Program. (We refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining these safety measures in the Hospital VBP Program.) Unlike the Hospital IQR Program, performance data on measures maintained in the HAC Reduction and Hospital VBP Programs are used both to assess the quality of care provided at a hospital and to calculate incentive payment adjustments for a given year of each respective program based on performance. Also, the HAC Reduction and Hospital VBP Programs' incentive payment structures tie hospitals' payment adjustments on claims paid under the IPPS to their performance on selected

quality measures, including the above measures sufficiently incentivizing high performance as well as performance improvement on these measures among participating hospitals. By keeping the measures in the HAC Reduction and Hospital VBP Programs, patients, hospitals, and the public also continue to receive information about the quality of care provided with respect to these measures.

We discussed in the proposed rule that we believed removing these measures from the Hospital IQR Program, while keeping them in the HAC Reduction Program, would strike an appropriate balance of benefits in driving improvement on patient safety and costs associated with retaining these measures in more than one program, while continuing to keep patient safety improvement and reducing NHSN HAIs as high priorities. We refer readers to section IV.J.1. of the preamble of this final rule where we discuss safety measures included in the HAC Reduction Program and section IV.I.2.c.(2) of the preamble of this final rule for this discussion in the Hospital VBP Program. As discussed in section VIII.A.4.b. of the preamble this final rule, one of our main goals is to move forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients. We believe retaining these measures in the HAC Reduction Program and the Hospital VBP Program addresses the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care.<sup>271</sup> In addition, as discussed in more detail below, we

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<sup>271</sup> <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/MMF/General-info-Sub-Page.html>.

believe keeping these measures in the Hospital IQR Program would not align with our goal of not adding unnecessary complexity or cost with duplicative measures.

In the proposed rule, we proposed to remove the: (1) PSI 90 measure for the FY 2020 payment determination (which applies to the performance period of July 1, 2016 through June 30, 2018) and subsequent years; and (2) CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures for the CY 2019 reporting period/FY 2021 payment determination and subsequent years.

Comment: Many commenters did not support removal of the patient safety measures from the Hospital IQR Program, because although the reporting burden on hospitals associated with these measures may be significant, they believe the cost of infections to patients and to the economy is greater. Commenters noted that these measures are critical because hospital iatrogenic infections, accidents, errors, and injuries together are a leading cause of death in the United States.

Response: We agree with commenters that hospital-acquired conditions can pose substantial financial costs, as well as cause severe negative effects on patients' health and well-being.<sup>272</sup> It is for this reason that we did not propose to remove the PSI 90, CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures, collectively referred to as the patient safety measures, from the HAC Reduction Program, and we are not finalizing their proposed removal from the Hospital VBP Program. (We refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining these safety measures in the Hospital VBP Program.) Because many

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<sup>272</sup> Zimlichman E, et al. Health Care–Associated Infections A Meta-analysis of Costs and Financial Impact on the US Health Care System. *JAMA Intern Med.* 2013;173(22):2039-2046.

commenters agreed with our assessment that there are costs associated with using the same measures in multiple programs, to providers, to CMS, and to patients and consumers trying to understand information about the same measures used in different programs, we are finalizing our proposal to remove the PSI 90 measure for the FY 2020 payment determination as proposed. We are also finalizing our proposal to remove the five NHSN HAI measures (that is, the CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures) but with modification to remove the five NHSN HAI measures from the Hospital IQR Program one year later than proposed beginning with the CY 2020 reporting period/FY 2022 payment determination and for subsequent years. These policies are discussed in more detail below.

Comment: A few commenters did not support removal of the patient safety measures because they believed the rationale under proposed removal Factor 8 contradicts the Meaningful Measures Initiative priority of making clinically meaningful improvement to patient care with measurable reductions in patient safety events. Some commenters expressed concern that CMS may be inappropriately prioritizing the cost for those who collect the information over the benefits of the information to patients or direct care providers and recommended that protecting and improving the health of the public be central to decisions made regarding measure removals, particularly with regard to measures of patient safety.

Response: Because we continue to consider patient safety and reducing hospital-acquired conditions as high priorities (as reflected in the Meaningful Measures Initiative quality priority of making care safer by reducing harms caused in the delivery of care),

we are not finalizing our proposed to remove these six patient safety measures from the Hospital VBP Program. We refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining these safety measures in the Hospital VBP Program. We are also finalizing a modified version of our proposal under the Hospital IQR Program, such that instead of removing the five NHSN HAI measures (that is, the CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures) for the CY 2019 reporting period/FY 2021 payment determination and subsequent years as proposed, we are delaying removal for one additional year, until the CY 2020 reporting period/FY 2022 payment determination and subsequent years. By delaying removal of these measures from the Hospital IQR Program by one year, we will ensure consistency in collection and reporting of these data for continued use in the Hospital VBP Program and until such time when the collection, reporting, and validation of these data are transitioned to the HAC Reduction Program.

Because these measures will be publicly reported under the HAC Reduction and Hospital VBP Programs while also being used to assess hospital performance and impose payment adjustments on hospitals that perform poorly on these measures, we believe retaining the measures in two value-based purchasing programs and removing them from the Hospital IQR Program, will at least partly address the concerns of both the commenters who want to retain these measures and the commenters who supported their removal and de-duplication. We are, however, removing the PSI 90 measure for the FY 2020 payment determination (which applies to the performance period of July 1, 2016 through June 30, 2018) and subsequent years as proposed, because the data used to assess

performance under this measure are collected via claims and therefore require no additional collection processes. We reiterate that removing the patient safety measures from the Hospital IQR Program beginning with the CY 2020 reporting period/FY 2022 payment determination for the five NHSN HAIs, and beginning with the FY 2020 payment determination for the PSI 90 measure, will not end or otherwise interfere with collection or public reporting of these data under other CMS quality programs. Under the HAC Reduction Program: (1) the NHSN HAI measures data will continue to be made publicly available on the *Hospital Compare* website on a quarterly basis, and (2) the PSI 90 data will continue to be made public on an annual basis, with all of these measures publicly reported in a consumer-friendly manner as well as through downloadable files. We refer readers to sections IV.J.4.e. and IV.J.4.h.(1) of the preamble of this final rule for discussions of data collection and public reporting in the HAC Reduction Program. We note that section 1886(p)(6) of the Act requires the HAC Reduction Program to make information available to the public regarding hospital-acquired conditions of each applicable hospital on the *Hospital Compare* website in an easily understandable format. Furthermore, section 1886(o)(10)(A) of the Act requires the Hospital VBP Program to make information available to the public regarding the performance of individual hospitals, including performance with respect to each measure, on the *Hospital Compare* website in an easily understandable format. We refer readers to section IV.J.4.h.(1) of the preamble of this final rule for discussion of public reporting under the HAC Reduction Program. We will continue to monitor hospital performance on these measures under both the HAC Reduction and Hospital VBP Programs, including any

unintended consequences that may be associated with removing the measures from the Hospital IQR Program.

Comment: Several commenters specifically supported the removal of the NHSN HAI measures from the Hospital IQR Program to minimize redundancy in the programs and to reduce the costs associated with tracking and previewing reports in multiple programs, while noting that the cost and burden of infection surveillance, NHSN case identification, NHSN program maintenance, and data submission would not change. One commenter noted the benefit of removing the measures from the Hospital IQR Program, which only encourages reporting of quality data, while retaining them in the HAC Reduction Program, which directly ties payment to quality outcomes. A few commenters supported removing the NHSN HAI measures from the Hospital IQR Program, but encouraged CMS to maintain transparency of individual NHSN HAI measures by continuing to publicly report performance data on the *Hospital Compare* website. A few commenters expressed hope that removal of these measures from the Hospital IQR Program would not weaken incentives for facilities to report HAI surveillance data to the NHSN because conducting HAI surveillance using NHSN methods and maintaining quality infection prevention and control programs improves patient safety. Commenters recommended that CMS work with other agencies, experts, and State health departments to continue to improve quality around patient safety.

Response: We thank the commenters for their support of our proposal to de-duplicate the NHSN HAI measures (that is, the CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures) from the Hospital IQR Program. As

noted previously, we will continue to publicly report hospital performance data on these measures under the HAC Reduction and Hospital VBP Programs in a manner that is transparent and easily understood by patients. As noted above, we refer readers to sections IV.J.4.h.(1) and IV.I.2.c.(2) of the preamble of this final rule where we detail our policies for these measures in the HAC Reduction and Hospital VBP Programs.

Specifically, the NHSN HAI data will continue to be made available on a quarterly basis in a consumer-friendly manner on *Hospital Compare* and also through downloadable files. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting these data. We further believe removing the NHSN HAI measures from the Hospital IQR Program will have no impact on the incentive to report these measure data because the measures will remain in both the HAC Reduction and Hospital VBP Programs' measure sets, under which hospitals are subject to payment adjustments based on their performance.

Comment: Several commenters supported removal of the measures from the Hospital IQR Program but recommended that the measures, and their associated validation, scoring, and public reporting requirements, be retained in the Hospital VBP Program instead of the HAC Reduction Program because the Hospital VBP Program provides incentives for each facility's performance improvement as well as penalties for poor performance, whereas the HAC Reduction Program only penalizes hospitals in the worst-performing quartile (25 percent) of program performance. One commenter similarly supported only retaining the NHSN HAI measures in the Hospital VBP Program because the HAC Reduction Program's risk adjustment strategies are limited and

may not appropriately account for facility-specific populations, leading to the over-penalization of hospitals that serve predominately high-risk patients. If retaining the NHSN HAI measures only in the Hospital VBP Program were not possible, one commenter recommended modifying the HAC Reduction Program to incorporate an incentive structure like that used in the Hospital VBP Program.

Response: We thank the commenters for their comments. As discussed above, we are finalizing removal of the NHSN HAI and PSI 90 measures from the Hospital IQR Program with modification and retaining them in both the HAC Reduction and Hospital VBP Programs. In connection with these measure removals from the Hospital IQR Program, we are finalizing our proposals to adopt HAI data collection and validation processes under the HAC Reduction Program that align with those currently used in the Hospital IQR Program. We refer readers to section IV.J.4.e. of the preamble of this final rule where we discuss the HAI data collection and validation processes under the HAC Reduction Program in further detail.

While we recognize that the payment structures of the HAC Reduction Program and Hospital VBP Program are different, particularly in that the Hospital VBP Program scoring methodology scores hospitals on the higher of improvement or achievement on each measure, and incentivizes all hospitals to improve and achieve high performance with both positive and negative payment adjustments. Because many commenters have expressed this similar concern about the potential reduced incentive for hospitals to continue to improve and achieve high performance on these safety measures, we are not finalizing our proposal to remove these measures from the Hospital VBP Program and

refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss this decision in detail.

We note that the HAC Reduction Program was designed to include risk-adjusted measures that are reflective of hospital performance (78 FR 50712 through 50715). We will continue to consult with the CDC and take this feedback into consideration for measure maintenance and future refinement of measure specifications. Furthermore, we will continue to monitor hospital performance on these measures under both the HAC Reduction and Hospital VBP Programs, including any unintended consequences. We will take the commenter's feedback regarding the HAC Reduction Program incentive structure into consideration for future years to the extent authorized under section 1886(p) of the Act.

Comment: Several commenters disagreed that the patient safety measures in the Hospital IQR Program are duplicative of measures in other programs and further recommended that more patient safety measures should be added to quality reporting programs out of concern that quality and cost-effectiveness are nullified when safety is absent. One commenter noted that by virtue of being housed in the Hospital IQR Program, virtually all hospitals report on and are accountable to the public for these measures and, if removed from the Hospital IQR Program, many hospitals might choose to no longer report on these measures. Moreover, some commenters expressed concern that if the patient safety measures were removed from the Hospital IQR Program, then hospitals would not be given the payment incentive for full reporting, creating a financial disincentive to report the measures because the HAC Reduction Program only penalizes

hospitals that perform in the lowest quartile of performance, potentially resulting in increased infections and patient safety issues. Several commenters expressed concern that if these measures are retained only in the HAC Reduction Program, and the HAC Reduction Program was repealed (through a repeal of the Patient Protection and Affordable Care Act), that hospitals would be left with nothing to incentivize reporting on patient safety measures.

Response: We seek to clarify that these patient safety measures previously finalized for the Hospital IQR, Hospital VBP, and HAC Reduction Programs are the same six measures, and that subsection (d) hospitals are subject to all three programs. Because the HAC Reduction Program imposes a 1 percent payment penalty on all hospitals scoring in the worst-performing quartile of all subsection (d) hospitals (and hospitals that do not report measures and do not have a waiver receive the worst-possible score for those measures, (79 FR 50098 and 81 FR 57013)) and the Safety domain using patient safety measures comprises 25 percent of a hospital's Total Performance Score under the Hospital VBP Program, we believe there are sufficiently strong incentives to ensure hospitals continue to report and strive for high performance on these patient safety measures. We note that the payment adjustment associated with not reporting data to the Hospital IQR Program is a one-quarter reduction in the hospital's annual payment update (APU). There is no positive payment adjustment associated with either reporting data to the program or a hospital's performance on a measure collected under the Hospital IQR

Program.<sup>273</sup> We refer readers to the table below for more information on average APU percentages since FY 2015 when the financial risk for failure to report data under the Hospital IQR Program became a one-fourth reduction of the annual payment update:

<b>FY</b>	<b>APU</b>	<b>One-fourth of APU</b>
2015	1.4	0.35
2016	0.9	0.23
2017	0.95	0.24
2018	1.2	0.3
Average	1.11	0.28

In order to ensure continuity under the HAC Reduction Program for the public reporting of the NHSN HAI data quarterly and to assess payment penalties based on hospitals’ performance on the measures, we believe it is appropriate to transfer collection of these patient safety measure data to that program. We further note that in retaining these measures in the Hospital VBP Program, performance on these measures will also continue to be tied to that program’s payment incentive structure, reinforcing improvement and high achievement on the measures, and providing positive as well as negative payment adjustments. We acknowledge commenters’ concern regarding future potential statutory changes, and would address any such changes in future rulemaking.

Comment: A few commenters did not support removal of the patient safety measures, asserting that retaining the measures in only one program would not alleviate any significant burden on hospitals because there is no burden associated with data

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<sup>273</sup> Sections 1886(b)(3)(B)(viii)(I) and (b)(3)(B)(viii)(II) of the Act state that the applicable percentage increase for FY 2015 and each subsequent year shall be reduced by one-quarter of such applicable percentage increase (determined without regard to sections 1886(b)(3)(B)(ix), (xi), or (xii) of the Act) for any subsection (d) hospital that does not submit data required to be submitted on measures specified by the Secretary in a form and manner, and at a time, specified by the Secretary.

submission for claims-based measures, such as the PSI 90 measure, and hospitals submit data to the NHSN only once for multiple programs in the case of the NHSN HAI measures.

Response: While we agree with commenters that removal of these measures from the Hospital IQR Program may not significantly reduce the information collection burden of reporting associated with these measures due to either their claims-based collection or their continued use in another program, the costs associated with a measure also include those associated with reviewing multiple preview reports, which would be reduced by streamlining measure sets. Further, as discussed in section VIII.A.4.b. of the preamble of this final rule, when evaluating the removal of a measure under removal Factor 8, we consider costs beyond the information collection burden, including, but not limited to: (1) provider and clinician information collection burden and related cost and burden associated with the submission/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other quality programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the CMS cost associated with the program oversight of the measure, including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other federal and/or State regulations (if applicable). As stated above, in response to many commenters, we are not finalizing their proposed removal from the Hospital VBP Program. We refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining these safety measures in the

Hospital VBP Program. We also note that, as discussed above, we are finalizing a modified version of our proposal, such that we are delaying removal of the NHSN HAI measures from the Hospital IQR Program for one year such that removal begins with the CY 2020 reporting period/FY 2022 payment determination in order to ensure consistency in data collection and reporting while we work to establish data collection policies for these measures under the Hospital VBP Program. This will also help to have a more seamless transition for data collection, validation, and public reporting under the HAC Reduction Program.

Comment: Many commenters did not support removal of the patient safety measures due to concerns about transparency in public reporting. These commenters expressed concern that if the patient safety measures were removed from the Hospital IQR Program, that public reporting of the measure data would no longer be available, decreasing the information available to the public, and thereby, disincentivizing related hospital quality improvement efforts, leading to endangering the lives and safety of vulnerable patients. A few commenters noted that informing the public of hospital quality performance is a central purpose of the Hospital IQR Program; public reporting of these measures helps focus and strengthen efforts to improve healthcare safety and quality. One commenter asserted that 90 percent of the measures in the Hospital IQR Program have seen improvement, a record unparalleled in any other health quality programs. Several commenters further expressed concern that even if these measures are retained in another CMS quality program, the resulting data may not be reported in an easily accessible manner. Therefore, commenters urged CMS to prioritize transparency

throughout its programs, particularly as it relates to patient safety measures, by continuing to publicly report patient safety measure data on the *Hospital Compare* website to enable hospitals to compare their performance with other hospitals to drive quality improvement efforts and for patients to make informed decisions about their health care.

Response: We appreciate the commenters' concerns and reiterate that we will continue to report measure-level data for all of CMS' quality programs in a manner that is transparent and easily understood by patients and consumers. As noted above, under the HAC Reduction Program, data on the NHSN HAI measures will continue to be made publicly available on the *Hospital Compare* website as they have been on a quarterly basis; furthermore, data on the PSI 90 measure will continue to be published on an annual basis, with all of these measures publicly reported in a consumer-friendly manner and also through downloadable files. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting these data. We refer readers to section IV.J.4.h.(1) of the preamble of this final rule where this is discussed in more detail for the HAC Reduction Program.

Comment: Several commenters did not support removal of the patient safety measures from the Hospital IQR Program because it provided the original statutory mechanism requiring quality data to be made public on the *Hospital Compare* website and because it has served as the primary vehicle for public reporting of hospital performance data. One commenter asserted its interpretation that measures not reported through the Hospital IQR Program cannot, by statute, be used in other payment programs,

noting that CMS attempted to report a set of Deficit Reduction Act (DRA)-HAC measures removed from the Hospital IQR Program on the *Hospital Compare* website, but concluded the HAC Reduction Program lacked the statutory authority because measures not in the Hospital IQR Program could not be reported on the *Hospital Compare* website.

Response: Under the holistic approach of evaluating the measures used in the four inpatient hospital quality programs – the Hospital IQR, Hospital VBP, HAC Reduction, and Hospital Readmissions Reduction Programs – as discussed above and in the preamble of the proposed rule, the Hospital IQR Program will continue to serve as the primary quality reporting program for quality and cost measures that are important for data collection and public reporting, but may not be ready or appropriate for use in one of the other value-based purchasing programs. As required under sections 1886(o)(2)(A) and 1886(o)(2)(C)(i) of the Act, we will continue to select measures for the Hospital VBP Program that have been specified for the Hospital IQR Program and refrain from beginning the performance period for any new measure until the data on that measure have been posted on *Hospital Compare* for at least one year. We note the statute does not require a measure that has met these statutory requirements to remain in the Hospital IQR Program at the same time as the Hospital VBP Program. The HAC Reduction and Hospital Readmissions Reduction Programs do not have any similar statutory requirements.

We believe removing measures that have transitioned to a value-based purchasing program from the Hospital IQR Program will better enable us to focus on new quality measures and collecting and publicly reporting these data for both patients and providers

without imposing additional cost or burden on providers for duplicative measures unless the benefits outweigh the costs. (For example, we refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining these patient safety measures in the Hospital VBP Program.)

We would like to clarify that the payment provision established by section 5001(c) of the Deficit Reduction Act (DRA) of 2005 (also known as DRA-HAC or the Hospital-Acquired Conditions (Present on Admission Indicator) payment provision), is a policy under which hospitals no longer receive additional payment for cases in which one of a selected set of HACs occurred but was not present on admission.<sup>274,275</sup> While CMS does calculate and report rates for a subset of the conditions included in the DRA-HAC payment provision under DRA HAC Reporting via public use files, this payment policy and associated reporting are separate and distinct from the Hospital IQR and HAC Reduction Programs discussed in this final rule.

We further disagree that the HAC Reduction Program lacks statutory authority to publicly report measures that are not also in the Hospital IQR Program, and refer readers to section 1886(p)(6) of the Act, which specifically requires the Secretary to make publicly available information regarding hospital acquired conditions under the HAC Reduction Program and to post such information on *Hospital Compare* in an easily understandable format. We also refer readers to sections IV.J.4.b. and IV.J.4.h.(1) of the

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<sup>274</sup> Additional information about the DRA-HAC payment provision is available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/index.html>.

<sup>275</sup> <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Downloads/FAQ-DRA-HAC-PSI.pdf>.

preamble of this final rule where we address in detail how the NHSN HAI measures will be publicly reported on *Hospital Compare* under the HAC Reduction Program.

Comment: Several commenters expressed concern that removing these measures could negatively impact States that have structured their laws to align with CMS regulations.

Response: We acknowledge commenters' concern, but we disagree because, as stated above, these measure data will continue to be collected under HAC Reduction Program and made publicly available – the NHSN HAI data on a quarterly basis and PSI 90 data on an annual basis – in a consumer-friendly manner on *Hospital Compare* and also through downloadable files which can be accessed by all stakeholders, including States and public health agencies.

Comment: Several commenters expressed particular concern regarding removal of the PSI 90 measure. Specifically, one commenter worried that the measure's 10 individual component indicators of the composite measure may no longer be publicly reported with the same level of granularity if the measure were removed from the Hospital IQR Program. This commenter recommended CMS continue to publicly report both the full composite score for the PSI 90 measure as well as the scores of individual indicators comprising the measure, because the commenter believed that the PSI 90 measure represents important patient safety outcomes data. Another commenter recommended that CMS delay the removal of the PSI 90 measure from the Hospital IQR Program until the measure steward transfer from AHRQ to CMS is completed.

Response: As discussed above, we believe retaining the PSI 90 measure in the HAC Reduction Program, which specifically focuses on reducing hospital-acquired conditions and improving patient safety outcomes, as well as not finalizing removal of this measure from the Hospital VBP Program, while finalizing its removal as proposed from the Hospital IQR Program will at least partly address the concerns of both commenters who want to retain this measure and commenters who supported its removal and de-duplication. We reiterate that removing this measure from the Hospital IQR Program will not end or otherwise interfere with public reporting of these data. We refer readers to section IV.J.4.h. of the preamble of this final rule in which the HAC Reduction Program is finalizing its proposal to make data available in the same form and manner as currently displayed under the Hospital IQR Program. The data will continue to be made available in a consumer-friendly manner on *Hospital Compare*, with the same granularity, and also through downloadable files. We therefore continue to believe that removing this measure from the Hospital IQR Program as proposed while retaining it in two value-based purchasing programs strikes the appropriate balance of benefits and costs associated with using the PSI 90 measure across the programs. We further believe it is unnecessary to delay removal of the PSI 90 measure from the Hospital IQR Program until after measure stewardship has transitioned from AHRQ to CMS because the measure specifications as previously adopted for both the HAC Reduction Program and Hospital IQR Program remain unchanged.<sup>276</sup>

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<sup>276</sup> We note that measure stewardship of the recalibrated version of the Patient Safety and Adverse Events Composite (PSI 90) is transitioning from AHRQ to CMS and, as part of the transition, the measure will be referred to as the CMS Recalibrated Patient Safety Indicators and Adverse Events Composite (CMS PSI

Comment: One commenter suggested modifying the patient safety measures to include bidirectional case reporting, which the commenter believed incentivizes public health reporting and is important to public health agencies.

Response: We thank the commenter for its suggestion. We interpret the commenter's reference to "bidirectional case reporting" as the NHSN system allowing data from public health agencies to populate NHSN and the NHSN system allowing public health agencies access to NHSN data. We will consult with the CDC and evaluate whether bidirectional case reporting is feasible and consider this option in the future if feasible and appropriate to do so.

Comment: Several commenters supported the removal of the patient safety measures from the Hospital IQR Program for the following reasons: (1) to reduce the costs associated with reporting the same measure in multiple programs with differing reporting periods; (2) to reduce the confusion associated with reviewing multiple reports from multiple programs for the same measures; and (3) to streamline quality reporting requirements. Some commenters supported the removal of patient safety measures from the Hospital IQR Program, but recommended that we continue to publicly report these measures on the *Hospital Compare* website under the HAC Reduction Program, because commenters believed these measures are of great interest to the public.

Response: We thank the commenters for their support of our proposal to de-duplicate the patient safety measures from the Hospital IQR Program. As discussed

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90) when it is used in CMS quality programs. The 2018 measure specifications for PSI 90 as it is used in both the HAC Reduction Program and the Hospital IQR Program can be found at: [https://qualityindicators.ahrq.gov/Modules/PSI\\_TechSpec\\_ICD10\\_v2018.aspx](https://qualityindicators.ahrq.gov/Modules/PSI_TechSpec_ICD10_v2018.aspx).

above, we are finalizing removal of these measures from the Hospital IQR Program with modification to delay removal of the NHSN HAI measures for one year and retaining them in the HAC Reduction and Hospital VBP Programs.

Comment: One commenter recommended that whichever quality program retains the patient safety measures should retain the administrative requirements previously provided under the Hospital IQR Program, including data collection requirements, validation requirements, and scoring associated with data completeness, timeliness, and accuracy, as well as public reporting of the data on *Hospital Compare* website. Another commenter specifically supported the removal of the PSI 90 measure from the Hospital IQR Program and retention in the HAC Reduction Program because the HAC Reduction Program will be the program primarily focusing on safety of care quality for the inpatient hospital setting. In addition, the commenter recommended that the PSI 90 measure be validated and publicly reported on the *Hospital Compare* website.

Response: We appreciate the first commenter's suggestion and note that while the patient safety measures are being removed from the Hospital IQR Program, they are being retained in the HAC Reduction Program and the Hospital VBP Program and will be subject to the administrative requirements and scoring methodologies of those programs. Further, we refer readers to section IV.J.4.h. of the preamble of this final rule in which the HAC Reduction Program is finalizing its proposal to make data available in the same form and manner as currently displayed under the Hospital IQR Program. We reiterate that the PSI 90 measure will be publicly reported on the *Hospital Compare* website, however, it will not be included in the HAC Reduction Program validation process

because it is a claims-based measure for which hospitals do not submit any additional quality measure data for validation.

Comment: A few commenters expressed support specifically for the removal of the PSI 90 measure from the Hospital IQR Program to reduce: (1) redundant and duplicative work for providers; and (2) costs associated with reporting and remaining in compliance with the requirements of quality reporting programs. One commenter supported removal of the PSI 90 measure from the Hospital IQR Program because it believed that it is unclear whether recent measure modifications might affect hospital performance. Further, the commenter did not believe that such population-based measures are appropriate for hospital accountability, and recommended that the effects of the modification on performance and ranking be explored before implemented in any of the quality reporting programs.

Response: We thank the commenters for their support of our proposal to de-duplicate the PSI 90 measure from the Hospital IQR Program. As discussed above, we are finalizing removal of this measure from the Hospital IQR Program as proposed because the cost of keeping the measure in three CMS programs outweighs the benefits. We acknowledge the commenter's concern about the impact of the recent measure modifications, which we interpret as referencing the ICD-10 change and broadening of the cohort (81 FR 57128 through 57133). However, we continue to believe this measure as specified is valid and reliable, and therefore, appropriate for use in other CMS quality programs. We appreciate the commenter's feedback regarding population-based measures and will take that into consideration for future program years.

Comment: One commenter opposed the inclusion of the PSI 90 measure in any quality program and recommended that CMS not reintroduce the measure until it meets the standards of the National Quality Forum.

Response: We note the PSI 90 measure (NQF # 0531) is currently endorsed by the National Quality Forum (NQF).<sup>277</sup> As stated above, we continue to believe this measure is a valid and reliable measure of potentially preventable hospital-related events associated with harmful outcomes for patients. We further note that the PSI 90 measure remains in the HAC Reduction Program, as well as the Hospital VBP Program beginning with the FY 2023 program year (we refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss not finalizing our proposal to remove the PSI 90 measure from the Hospital VBP Program).

Comment: One commenter recommended that CMS carefully consider whether or not to include NHSN CDI in performance programs because the commenter believed that it is notably flawed due to variable documentation, surveillance, and testing practices among organizations.

Response: While we acknowledge variability in hospital documentation, reporting, and sensitivity of laboratory testing methods may make a difference in the event data hospitals report, the CDC's Multidrug-Resistant Organism & *Clostridium difficile* Infection (CDI) Module provides guidelines for identifying, documenting, and

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<sup>277</sup> For a full history of the PSI 90 measure's NQF review and endorsement, we refer readers to the NQF Quality Positioning System page for this measure, available at: <http://www.qualityforum.org/QPS/0531>.

reporting events under this measure.<sup>278</sup> In addition, we believe the validation process established for the NHSN CDI measure and other NHSN measures is the best approach for us to systematically identify candidates that are likely to yield a high proportion of cases that should have been reported to NHSN.<sup>279</sup> As discussed in section IV.J.4.e. of the preamble of this final rule, the HAC Reduction Program is finalizing its proposal to begin validating the NHSN HAI measures following their removal from the Hospital IQR Program. We believe transitioning this validation process to a payment program will provide sufficient incentives for hospitals to ensure diligent and accurate reporting of CDI events; however, we will also consult with the CDC to take the commenter's concerns into consideration for future program years.

After consideration of the public comments we received, we are finalizing our proposal to remove the PSI 90 measure beginning with the FY 2020 payment determination (which applies to the performance period of July 1, 2016 through June 30, 2018) as proposed. Furthermore, we are finalizing our proposals to remove the CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI measures with modification; instead of removing them beginning with the CY 2019 reporting period/FY 2021 payment determination as proposed, we are finalizing a delay in the removal of these measures until the CY 2020 reporting period/FY 2022 payment determination.

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<sup>278</sup> We refer readers to the CDC's Multidrug-Resistant Organism & *Clostridium difficile* Infection Module for a detailed discussion of how to report these events. Available at: [https://www.cdc.gov/nhsn/PDFs/pscManual/12pscMDRO\\_CDADcurrent.pdf](https://www.cdc.gov/nhsn/PDFs/pscManual/12pscMDRO_CDADcurrent.pdf).

<sup>279</sup> 78 FR 50829 through 50834.

### (3) Claims-Based Readmission Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20475 through 20476), we proposed to remove the following seven claims-based readmission measures beginning with the FY 2020 payment determination:

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Acute Myocardial Infarction (AMI) Hospitalization (NQF #0505) (READM-30-AMI) (adopted at 73 FR 68781);

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Coronary Artery Bypass Graft (CABG) Surgery (NQF #2515) (READM-30-CABG) (adopted at 79 FR 50220 through 50224);

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization (NQF #1891) (READM-30-COPD) (adopted at 78 FR 50790 through 50792);

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Heart Failure (HF) Hospitalization (NQF #0330) (READM-30-HF) (adopted at 73 FR 48606);

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Pneumonia Hospitalization (NQF #0506) (READM-30-PN) (adopted at 73 FR 68780 through 68781);

- Hospital-Level 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee

Arthroplasty (TKA) (NQF #1551) (READM-30-THA/TKA) (adopted at 77 FR 53519 through 53521); and

- 30-Day Risk-Standardized Readmission Rate Following Stroke Hospitalization (READM-30-STK) (adopted at 78 FR 50794 through 50798).

We proposed to remove READM-30-AMI, READM-30-CABG, READM-30-COPD, READM-30-HF, READM-30-PN, and READM-30-THA/TKA under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. (The READM-30-STK measure is discussed further below.) We believe removing these measures from the Hospital IQR Program would eliminate costs associated with implementing and maintaining these measures for the program, and in particular, development and release of duplicative and potentially confusing CMS confidential feedback reports provided to hospitals across multiple hospital quality and value-based purchasing programs. We refer readers to section VIII.A.4.b. of the preamble of the proposed rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. Health care providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used across value-based purchasing programs. Beneficiaries may also find it confusing to see public reporting on the same measures in different programs. In addition, maintaining the specifications for the

measures, as well as the tools we need to analyze and publicly report the measure data result in costs to CMS. We believe the costs as described above outweigh the associated benefit to beneficiaries of receiving the same information from multiple programs, because that information can be captured through inclusion of these measures solely in the Hospital Readmissions Reduction Program. We believe the benefit to beneficiaries of keeping this measure in the Hospital IQR Program is limited because the public would continue to receive measure information via another CMS quality program.

Because we continue to believe these measures provide important data on patient outcomes following inpatient hospitalization (addressing the Meaningful Measures Initiative quality priority of promoting effective communication and coordination of care), we will continue to use these measures in the Hospital Readmissions Reduction Program. By keeping the measures in the Hospital Readmissions Reduction Program, patients, hospitals, and the public would continue to receive information about the quality of care provided with respect to these measures.

Unlike the Hospital IQR Program, performance data on measures maintained in the Hospital Readmissions Reduction Program are used both to assess the quality and value of care provided at a hospital and to calculate incentive payment adjustments for a given year of the program based on performance. The Hospital Readmissions Reduction Program's incentive payment structure ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected quality measures, including the above measures which are already in the Hospital Readmissions Reduction Program, sufficiently incentivizing performance improvement on these measures among

participating hospitals. As discussed in section VIII.A.4.b. of the preamble of the proposed rule, one of our main goals is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe removing these measures from the Hospital IQR Program is the best way to achieve this. In addition, as discussed in section I.A.2. of the preamble of this final rule, we believe keeping these measures in both programs no longer aligns with our goal of not adding unnecessary complexity or cost with duplicative measures across programs.

Furthermore, we proposed to remove the READM-30-STK measure under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. The READM-30-STK measure collects important hospital-level, risk-standardized readmission rates following inpatient hospitalizations for strokes (78 FR 50794). However, these data also are captured in the Hospital-Wide All-Cause Unplanned Readmission Measure (HWR) adopted into the Hospital IQR Program in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53521 through 53528), because that measure comprises a single summary score, derived from the results of different models for each of the following specialty cohorts: medicine; surgery/gynecology; cardiorespiratory; cardiovascular; and neurology (77 FR 53522). These cohorts cover conditions and procedures defined by the AHRQ Clinical Classification Software (CCS), which collapsed more than 17,000 different ICD-9-CM diagnoses and procedure codes into 285 clinically-coherent, mutually-exclusive condition

categories and 231 mutually-exclusive procedure categories (77 FR 53525). The transition of the CCS-based measure specifications to the ICD-10-CM version of the CCS is underway. The ICD-10 to CCS map and tools for its use are currently available at: <https://www.hcup-us.ahrq.gov/toolsoftware/ccs10/ccs10.jsp>. Readmission rates following inpatient hospitalizations for strokes are captured in that information, specifically, the neurology cohort. We believe that the costs associated with interpreting the requirements for two measures with overlapping data points outweigh the benefit to beneficiaries of the additional information provided by this measure, because the measure data are already captured within another measure in the Hospital IQR Program. Also, maintaining the specifications for this measure, as well as the tools we need to analyze and publicly report the measure data result in costs to CMS. Thus, removing the READM-30-STK measure would help to reduce duplicative data and produce a more harmonized and streamlined measure set. As discussed in section VIII.A.4.b. of the preamble of this final rule, one of our main goals is to move forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe removing this measure from the Hospital IQR Program is the best way to do that.

We recognize, however, that including condition- and procedure-specific clinical quality measure data can provide hospitals with actionable feedback to better equip them to implement targeted improvements in comparison to an overall quality measure. In addition, condition- and procedure-specific measures can provide valuable data to

specialty societies by clearly assessing performance for their specialty, and may be valuable to persons and families who prefer information on certain conditions and procedures relevant to them. The Hospital-Wide Readmission measure, unlike condition- and procedure-specific measures, also requires improvement in quality across multiple service lines to produce improvement in the overall rate, which may give the perception of slower or smaller gains in hospital quality. Conversely, hospitals would still have a strong motivation to improve stroke readmissions performance if they want to improve their overall performance on the Hospital-Wide Readmission measure posted on *Hospital Compare*.

Therefore, we proposed to remove the READM-30-AMI, READM-30-CABG, READM-30-COPD, READM-30-HF, READM-30-PN, READM-30-THA/TKA, and READM-30-STK measures for the FY 2020 payment determination (which would apply to the performance period of July 1, 2015 through June 30, 2018) and subsequent years.

We invited public comment on our proposal to remove these measures from the Hospital IQR Program as well as feedback on whether there are reasons to retain one or more of the measures in the Hospital IQR Program.

Comment: A number of commenters supported CMS' proposals to remove seven claims-based readmission measures beginning with the FY 2020 payment determination. One commenter supported removal of the readmission measures because they are less applicable to its patient population. One commenter supported the removal of these measures, but highlighted its belief that removing them would not reduce burden because

hospitals will still report most the most of these measures to the Hospital Readmissions Reduction Program.

Response: We thank commenters for their support of the removal of these measures. We respectfully disagree that removing these measures will not reduce the costs associated with these measures. We believe that removing these measures would reduce costs for providers by eliminating the need to monitor the same measures used in multiple programs, including tracking confidential feedback, preview reports, and publicly reported information on these measures. Beneficiaries may also find it confusing to see public reporting on the same measures in different programs. In addition, costs to CMS would be reduced by no longer having to maintain the tools needed to analyze and publicly report the measure data for multiple programs. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures.

Comment: One commenter supported CMS' proposals to remove READM-30-AMI, READM-30-CABG, READM-30-COPD, READM-30-HF, READM-30-PN, and READM-30-THA/TKA for the following reasons: (1) reducing duplication, which will in turn reduce administrative burden as well as patient and provider confusion; and (2) preventing hospitals from being penalized or rewarded for the same measure across multiple programs.

Response: We thank the commenter for its support of the removal of READM-30-AMI, READM-30-CABG, and READM-30-HF and agree with the reasons.

Comment: One commenter supported CMS' proposals to remove READM-30-AMI, READM-30-CABG, and READM-30-HF for purposes of administrative simplification, and recommended that CMS eliminate use of those three measures from all quality programs altogether. The commenter also expressed their opinion that READM-30-HF may not be an appropriate indicator of quality based on emerging literature.

Response: We thank commenters for their support of the removal of READM-30-AMI, READM-30-CABG, and READM-30-HF measures from the Hospital IQR Program. While we continue to believe these measures as specified are valid and reliable (adopted at 73 FR 68781, 79 FR 50220, and 73 FR 48606 respectively), we are removing them from the Hospital IQR Program because the costs associated with these measures outweigh the benefits of their continued use in the Hospital IQR Program.

We note that, as discussed in section IV.H.4. of the preamble of this final rule, these measures will continue to be used in the Hospital Readmissions Reduction Program. However, we will take commenters' recommendations into consideration as we continue to evaluate the other quality programs' measure sets in future years.

Comment: One commenter specifically supported the proposal to remove REAMD-30-HF from the Hospital IQR Program because it would reduce the reporting burden on hospitals without compromising the measure in the Hospital Readmissions Reduction Program.

Response: We thank the commenter for its feedback.

Comment: A few commenters specifically supported the proposal to remove READM-30-THA/TKA. One commenter agreed that it is appropriate to address THA and TKA readmissions through the Hospital Readmissions Reduction Program.

Response: We thank the commenters for their feedback.

Comment: A few commenters supported CMS' proposal to remove the READM-30-STK measure for the following reasons: (1) the loss of condition-specific, hospital-level risk-standardized information is outweighed by the more important overarching goal of maintaining the least burdensome and most harmonized measure set; (2) the associated data will be used in aggregated form in the Hospital-Wide All-Cause Unplanned Readmission measure; and (3) the measure was never NQF endorsed.

Response: We thank the commenters for their feedback. We note that the Hospital IQR Program considers NQF endorsement when adopting measures into the measure set. Even if a measure is not NQF endorsed, the Hospital IQR Program may adopt it into the program under the exclusion authority in section 1886(b)(3)(B)(IX)(bb) of the Act, by considering other available topical measures that have been endorsed or adopted by a consensus organization.

Comment: A few commenters did not support CMS' proposals to remove the seven readmission measures. One commenter opposed removal of the seven condition-specific readmission measures due to concerns that their removal could result in a lack of public access to user-friendly condition-specific outcomes information, and suggested that measure-level reporting continue on *Hospital Compare* under the Hospital

IQR Program to ensure that future improvements in public reporting can be adopted consistently across publicly reported measures.

Response: We thank the commenters for their concerns and reiterate that we will continue to publicly report measure-level data for all of CMS' quality programs in a manner that is transparent and easily understood by patients, as well as through downloadable files. These measures will continue to be included in the Hospital Readmissions Reduction Program, and we note that section 1886(q)(6) of the Act requires the Hospital Readmissions Reduction Program to make information available to the public regarding readmission rates of each subsection (d) hospital on the *Hospital Compare* website in an easily understandable format. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting this data. We refer readers to section IV.H.4. of the preamble of this final rule where we discuss these measures under the Hospital Readmissions Reduction Program.

Comment: One commenter did not support CMS' "holistic" view of the hospital quality programs. The commenter stated that initially adopting measures into the Hospital IQR Program allows for a period of measure validation, and for health systems to gain familiarity with the measures before they are moved into value-based purchasing programs, and expressed concern that CMS' "holistic" view would allow new measures to be adopted immediately into the value-based purchasing programs without this time for familiarization and validation. The commenter stated their belief that adopting measures directly into the value-based purchasing programs would result in significant harm, undue hardship, and potentially financial penalties on healthcare systems.

Response: We thank the commenter for its comment, but emphasize that our proposal to remove duplicative measures from the Hospital IQR Program does not affect the underlying statutory requirements of the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. Those programs will continue to select new measures as required by their statutory authority. For instance, the Hospital VBP Program will continue to select measures that have been specified under the Hospital IQR Program and refrain from beginning the performance period for any new measure until the data on that measure have been posted on *Hospital Compare* for at least one year. We note the HAC Reduction and Hospital Readmissions Reduction Programs do not have any similar statutory requirements in this regard as the Hospital VBP Program. We therefore disagree that these removals could result in harm, undue hardship, or financial penalties to hospitals because they do not alter the processes associated with adopting new measures into the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. We will, however, continue to consider on a case-by-case basis for each new measure whether it would be appropriate to propose the measure for the Hospital IQR Program before proposing to use it in either the HAC Reduction Program or the Hospital Readmissions Reduction Program.

Comment: One commenter did not support removal of the READM-30-AMI, READM-30-HF, and READM-30-PN measures because the commenter believed they are essential health and safety measurements, key to hospital accountability and incentivizing quality care. The commenter also expressed its opinion that the removal would decrease transparency and public accountability.

Response: We appreciate the commenter's concerns and reiterate that we will continue to publicly report measure-level data for all of CMS' quality programs in a manner that is transparent and easily understood by patients. The readmissions measures will continue to be publicly reported on *Hospital Compare* as they have been. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting this data. Because the READM-30-AMI, READM-30-CABG, READM-30-COPD, READM-30-HF, READM-30-PN, and READM-30-THA/TKA measures will be retained in the Hospital Readmissions Reduction Program, which ties hospital performance on the measures to payment adjustments, we believe hospitals will continue to be strongly incentivized to improve on the measures. We refer readers to section IV.H.7. of the preamble of this final rule where we discuss these policies under the Hospital Readmissions Reduction Program. In addition, because readmission rates for stroke patients will continue to be captured by the Hospital-Wide Readmission measure that is being retained in the Hospital IQR Program, we believe hospitals will continue to be strongly incentivized to improve on this measure as well.

After consideration of the public comments we received, we are finalizing removal of the READM-30-AMI, READM-30-CABG, READM-30-COPD, READM-30-HF, READM-30-PN, READM-30-THA/TKA, and READM-30-STK measures from the Hospital IQR Program measure set beginning with the FY 2020 payment determination as proposed.

#### (4) Claims-Based Mortality Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20476 through 20477), we proposed to remove five claims-based mortality measures across the FYs 2020, 2021, and 2022 payment determinations and subsequent years:

- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization (NQF #0230) (MORT-30-AMI) beginning with the FY 2020 payment determination (adopted at 71 FR 68206);

- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF) Hospitalization Surgery (NQF #0229) (MORT-30-HF) beginning with the FY 2020 payment determination (adopted at 71 FR 68206);

- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) (NQF #1893) (MORT-30-COPD) beginning with the FY 2021 payment determination (adopted at 78 FR 50792 through 50794);

- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization (NQF #0468) (MORT-30-PN) beginning with the FY 2021 payment determination (adopted at 72 FR 47351); and

- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery (NQF #2515) (MORT-30-CABG) beginning with the FY 2022 payment determination (adopted at 79 FR 50224 through 50227).

We proposed to remove MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-PN, and MORT-30-CABG under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. Removing these measures from the Hospital IQR Program would eliminate costs associated with implementing and maintaining these measures for the program, and in particular, development and release of duplicative and potentially confusing CMS confidential feedback reports provided to hospitals for both the Hospital IQR and Hospital VBP Programs. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. Health care providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used across value-based purchasing programs. Beneficiaries may also find it confusing to see public reporting on the same measures using different reporting periods in different programs. In addition, maintaining the specifications for the measures, as well as the tools we need to analyze and publicly report the measure data result in costs to CMS. We believe the costs associated with reviewing multiple feedback reports on these measures for more than one program outweigh the associated benefit to beneficiaries of receiving the same information from multiple programs, because that

information can be captured through inclusion of these measures solely in the Hospital VBP Program.

We continue to believe these measures provide important data on patient outcomes following inpatient hospitalization (addressing the Meaningful Measures Initiative quality priority of promoting effective prevention and treatment of chronic disease), which is why we will continue to use these measures in the Hospital VBP Program. Unlike the Hospital IQR Program, performance data on measures maintained in the Hospital VBP Program are used both to assess the quality and value of care provided at a hospital and to calculate incentive payment adjustments for a given year of the program based on performance. The Hospital VBP Program's incentive payment structure ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected quality measures, including the above listed measures, sufficiently incentivizing performance improvement on these measures among participating hospitals. By keeping the measures in the Hospital VBP Program, patients, hospitals, and the public continue to receive information about the quality of care provided with respect to these measures.

As discussed in section VIII.A.4.b. of the preamble of this final rule, one of our main goals is to move forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe removing these measures from the Hospital IQR Program is the best way to achieve that goal. In addition, as discussed in section I.A.2. of the preamble of this final rule, we

believe keeping these measures in both programs no longer aligns with our goal of not adding unnecessary complexity or cost with duplicative measures across programs.

We note that the Hospital VBP Program has adopted the MORT-30-COPD measure beginning with the FY 2021 program year (80 FR 49558), the MORT-30-PN measure (modified with the expanded cohort) beginning with the FY 2021 program year (81 FR 56996), and the MORT-30-CABG measure beginning with the FY 2022 program year (81 FR 56998). Therefore, we proposed to stagger the beginning date of the removals of these measures from the Hospital IQR Program to avoid a gap in public reporting of measure data. For the Hospital IQR Program, we proposed to remove the: (1) MORT-30-AMI and MORT-30-HF measures for the FY 2020 payment determination (which would use a performance period of July 1, 2015 through June 30, 2018) and subsequent years; (2) MORT-30-COPD and MORT-30-PN measures for the FY 2021 payment determination (which would use a performance period of July 1, 2016 through June 30, 2019) and subsequent years; and (3) MORT-30-CABG measure for the FY 2022 payment determination (which would use a performance period of July 1, 2017 through June 30, 2020) and subsequent years.

Comment: A number of commenters supported CMS' proposals to remove five claims-based mortality measures. One commenter specifically agreed with removing these measures under the new removal Factor 8 while continuing to use them in the Hospital VBP Program. One commenter expressed support for CMS' proposals to remove MORT-30-AMI, MORT-30-HF, and MORT-30-CABG because it would reduce the burden of information collection and review for hospitals and would eliminate

beneficiary confusion. One commenter specifically supported CMS' proposal to remove the MORT-30-HF measure from the Hospital IQR Program because it would reduce the reporting burden on hospitals without compromising the measure in the Hospital VBP Program.

Response: We thank the commenters for their support of removal of the five claims-based mortality measures.

Comment: One commenter supported the removal of these measures but noted that it did not believe burden would be reduced because the measures would still be reported in the Hospital VBP Program.

Response: We respectfully disagree that removing these measures will not reduce the costs associated with these measures. We believe that removing these measures would reduce the costs associated with tracking confidential feedback reports, preview reports, and publicly reported information for these measures in multiple programs. Healthcare providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used in multiple programs. Beneficiaries may also find it confusing to see public reporting on the same measures in different programs. In addition, costs to CMS would be reduced by no longer having to maintain the measure specifications, as well as the tools need to analyze and publicly report the measure data for multiple programs. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures.

Comment: One commenter sought clarification on whether removing these five mortality measures would also end public reporting on those measures. One commenter recommended that these measures continue to be publicly reported on *Hospital Compare*. A few commenters opposed CMS' proposals to remove five condition-specific mortality measures. A few commenters expressed concern that removing these measures would reduce program transparency and could result in a lack of public access to user-friendly condition-specific outcomes information. A few commenters recommended that measure-level reporting continue on *Hospital Compare* under the Hospital IQR Program, including frequency of reporting, for all measures in the Hospital VBP Program to ensure no loss of information to the public, and that future improvements in public reporting can be adopted consistently across publicly reported measures.

Response: We thank the commenters for their concerns and reiterate that we will continue to publicly report measure-level data for the MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-PN, and MORT-30-CABG measures on the *Hospital Compare* website under the Hospital VBP Program, in accordance with its policies and in a manner that is transparent and easily understood by patients. Section 1886(o)(10)(A) of the Act requires the Hospital VBP Program to make information available to the public regarding the performance of individual hospitals, including performance with respect to each measure, on the *Hospital Compare* website in an easily understandable format. These measures will continue to be reported on *Hospital Compare* as they have been for the Hospital IQR Program, but under the requirements of the Hospital VBP Program. We

will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting these data.

Comment: One commenter did not support CMS' "holistic" view of the hospital quality programs. This commenter stated that initially adopting measures into the Hospital IQR Program allows for a period of measure validation, and for health systems to gain familiarity with the measures before they are moved into value-based purchasing programs, and expressed concern CMS' "holistic" view would allow new measures to be adopted immediately into the value-based purchasing programs without this time for familiarization and validation. The commenter stated its belief that adopting measures directly into the value-based purchasing programs would result in significant harm, undue hardship, and potentially financial penalties on healthcare systems.

Response: We thank the commenter for its comment, but emphasize that our proposal to remove duplicative measures from the Hospital IQR Program does not affect the underlying statutory requirements for adding new measures to the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. Those programs will continue to select measures as required by their statutory authority. For instance, the Hospital VBP Program will continue to select measures that have been specified under the Hospital IQR Program and refrain from beginning the performance period for any new measure until the data on that measure have been posted on *Hospital Compare* for at least one year, as required by section 1886(o)(2)(C)(i) of the Act. We note the HAC Reduction and Hospital Readmissions Reduction Programs do not have any similar statutory requirements in this regard as the Hospital VBP Program. We therefore

disagree that these removals could result in harm, undue hardship, or financial penalties to hospitals because they do not alter the processes associated with adopting new measures into the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. We will, however, continue to consider on a case-by-case basis for each new measure whether it would be appropriate to propose the measure for the Hospital IQR Program before proposing to use it in either the HAC Reduction Program or the Hospital Readmissions Reduction Program.

Comment: One commenter did not support CMS' proposals to remove the MORT-30-AMI, MORT-30-HF, and MORT-30-PN measures because the commenter believed they are essential health and safety measurements, key to hospital accountability and incentivizing quality care. The commenter also expressed its opinion that the removal would decrease transparency and public accountability.

Response: We agree that these measures provide important information that can be used to promote accountability and to incentivize quality care. To further those goals, we will continue to include these measures in the Hospital VBP Program, which will both publicly report hospital performance on these measures and assess payment incentives to hospitals based on their performance on these and other quality measures. We refer readers to sections IV.I.2.d. and IV.I.2.e. of the preamble of this final rule where we list the measures used in the Hospital VBP Program. We appreciate the commenter's concerns and reiterate that we will continue to publicly report measure-level data for all of CMS' quality programs in a manner that is transparent and easily understood by

patients. We will also strive to minimize disruptions to preexisting processes and timelines for publicly reporting this data.

After consideration of the public comments we received, we are finalizing removal of MORT-30-AMI, MORT-30-HF, MORT-30-COPD, MORT-30-PN, and MORT-30-CABG from the Hospital IQR Program measure set across the FYs 2020, 2021, and 2020 payment determinations as proposed.

(5) Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) (NQF #1550) (Hip/Knee Complications) Measure

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20477 through 20478), we proposed to remove one complications measure, Hospital-level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) (NQF #1550) (Hip/Knee Complications), beginning with the FY 2023 payment determination, under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We refer readers to FY 2013 IPPS/LTCH PPS final rule (77 FR 53516 through 53518), where we adopted this measure.

We believe that removing this measure from the Hospital IQR Program would eliminate costs associated with implementing and maintaining the measure for the program, and in particular, development and release of duplicative and potentially confusing CMS confidential feedback reports provided to hospitals across multiple hospital quality and value-based purchasing programs. We refer readers to section

VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on this measure as we also use the measure in the Hospital VBP Program and the Comprehensive Care for Joint Replacement model (CJR model). Health care providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used across value-based purchasing programs. Beneficiaries may also find it confusing to see public reporting on the same measure in different programs. In addition, maintaining the specifications for the measure, as well as the tools we need to analyze and publicly report the measure data result in cost to CMS. We believe the costs as discussed above outweigh the associated benefit to beneficiaries of receiving the same information from more than one program, because that information can be captured through inclusion of this measure in the Hospital VBP Program.

As discussed in section VIII.A.4.b. of the preamble of this final rule, one of our main goals is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe removing this measure from the Hospital IQR Program is the best way to achieve this goal. We believe retaining the Hip/Knee Complications measure in both the Hospital IQR Program and the Hospital VBP Program no longer aligns with our current goal of

not adding unnecessary complexity or cost with duplicative measures across programs, as stated in section I.A.2. of the preamble of this final rule.

We continue to believe this measure provides important data on patient outcomes following inpatient hospitalization (addressing the Meaningful Measures Initiative quality priority of promoting effective treatment), which is why we will continue to use this measure in the Hospital VBP Program. Unlike the Hospital IQR Program, performance data on measures maintained in the Hospital VBP Program are used both to assess the quality and value of care provided at a hospital and to calculate incentive payment adjustments for a given year of the program based on performance. The Hospital VBP Program's incentive payment structure ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected quality measures, including the Hip/Knee Complications measure, sufficiently incentivizing performance improvement on this measure among participating hospitals. By keeping the measure in the Hospital VBP Program, patients, hospitals, and the public continue to receive information about the quality of care provided with respect to this measure.

Therefore, we proposed to remove the Hip/Knee Complications measure from the Hospital IQR Program beginning with the FY 2023 payment determination (which applies to the performance period of April 1, 2018 through March 31, 2021) and subsequent years. We chose to propose this timeframe because the Comprehensive Care for Joint Replacement model (CJR model) previously adopted the same measure and requires use of data collected under the Hospital IQR Program through the FY 2022 payment determination (which would use a performance period of April 1, 2017 through

March 31, 2020) (80 FR 73507). After removal from the Hospital IQR Program, we note that this measure would continue to be reported on the *Hospital Compare* website under the public reporting requirements of the Hospital VBP Program.

Comment: Many commenters supported CMS' proposal to remove the Hip/Knee Complications measure beginning with the FY 2023 payment determination. One commenter stated that including this measure in the Hospital VBP Program provides a stronger incentive for hospitals to focus on performance improvement.

Response: We thank the commenters for their support for the removal of this measure and agree that retaining this measure in the Hospital VBP Program incentivizes providers to perform well on this measure.

Comment: One commenter opposed CMS' proposal to remove the Hip/Knee Complications measure due to concerns that its removal will reduce program transparency and could result in a lack of public access to user-friendly condition-specific outcome information. The commenter recommended that measure-level data reporting continue on *Hospital Compare* under the Hospital IQR Program, including the frequency of reporting, for all measures in the Hospital VBP Program to ensure no loss of information to the public and that future improvements in public reporting can be adopted consistently across publicly reported measures.

Response: We thank the commenter for sharing its concerns, and reiterate that we will continue to publicly report measure-level data for the Hip/Knee Complications measure on the *Hospital Compare* website under the Hospital VBP Program according to program policies in a manner that is transparent and easily understood by patients.

Section 1886(o)(10)(A) of the Act requires the Hospital VBP Program to make information available to the public regarding the performance of individual hospitals, including performance with respect to each measure, on the *Hospital Compare* website in an easily understandable format. We will also strive to minimize any disruptions to preexisting processes and timelines for publicly reporting this data.

After consideration of the public comments we received, we are finalizing removal of the Hip/Knee Complications measure from the Hospital IQR Program measure set beginning with the FY 2023 payment determination and for subsequent years as proposed.

(6) Medicare Spending Per Beneficiary (MSPB) – Hospital Measure (NQF #2158)  
(MSPB)

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20478 through 20479), we proposed to remove one resource use measure, Medicare Spending Per Beneficiary (MSPB) – Hospital (NQF #2158) (MSPB), from the Hospital IQR Program beginning with the FY 2020 payment determination, under the proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51618) where we adopted this measure.

We believe that removing this measure from the Hospital IQR Program would eliminate costs associated with implementing and maintaining the measure, and in particular, development and release of duplicative and potentially confusing CMS confidential feedback reports provided to hospitals across multiple hospital quality and

value-based purchasing programs. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. For example, it may be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on this measure as we use the measure in the Hospital VBP Program. Health care providers incur additional cost to monitor measure performance in multiple programs for internal quality improvement and financial planning purposes when measures are used across value-based purchasing programs. Beneficiaries may also find it confusing to see public reporting on the same measure in different programs. In addition, maintaining the specifications for the measure, as well as the tools we need to analyze and publicly report the measure data result in costs to CMS. We believe the costs as discussed above outweigh the associated benefit to beneficiaries of receiving the same information from multiple programs, because that information can be captured through inclusion of this measure solely in the Hospital VBP Program.

As discussed in section VIII.A.4.b. of the preamble this final rule, one of our main goals is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe removing this measure from the Hospital IQR Program helps achieve that goal. In addition, as discussed in section I.A.2. of the preamble of this final rule, we believe keeping this measure in both programs no longer aligns with our goal of not adding unnecessary complexity or cost with duplicative measures across programs.

We continue to believe this measure provides important data on resource use (addressing the Meaningful Measures Initiative priority of making care affordable), which is why we will continue to use this measure in the Hospital VBP Program. Unlike the Hospital IQR Program, performance data on measures maintained in the Hospital VBP Program are used both to assess the quality and value of care provided at a hospital and to calculate incentive payment adjustments for a given year of the program based on performance. The Hospital VBP Program's incentive payment structure ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected quality measures, including the MSPB measure, sufficiently incentivizing performance improvement on this measure among participating hospitals. By keeping the measure in the Hospital VBP Program, patients, hospitals, and the public continue to receive information about the quality of care provided with respect to these measures.

Therefore, we proposed to remove the MSPB measure from the Hospital IQR Program beginning with the FY 2020 payment determination (which applies to the performance period of January 1, 2018 through December 31, 2018) and subsequent years. As a claims-based measure, which uses claims and administrative data to calculate the measure without any additional data collection from hospitals, we can operationally remove the MSPB measure sooner than certain other measures we proposed for removal in the proposed rule.

Comment: A few commenters expressed their support for CMS' proposal to remove the MSPB measure from the Hospital IQR Program.

Response: We thank the commenters for their support.

Comment: One commenter did not support CMS' proposal to remove the MSPB measure from the Hospital IQR Program based on their concern that CMS' "holistic" view would allow new measures to be adopted immediately into the value-based purchasing programs without adequate time for familiarization and validation. Specifically, the commenter stated that initially adopting measures into the Hospital IQR Program allows for a period of measure validation, and for health systems to gain familiarity with the measures before they are moved into value-based purchasing programs. The commenter stated its belief that adopting measures directly into the value-based purchasing programs would result in significant harm, undue hardship, and potentially financial penalties on healthcare systems.

Response: We thank the commenter for its feedback. We note that the MSPB measure has been used in the Hospital VBP Program since the FY 2015 program year. We also emphasize that our proposal to remove duplicative measures from the Hospital IQR Program does not affect the underlying statutory requirements of adding new measures to the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. Those programs will continue to select new measures as required by their statutory authority. For instance, the Hospital VBP Program will continue to select measures that have been specified under the Hospital IQR Program, like the MSPB measure, and refrain from beginning the performance period for any new measure until the data on that measure have been posted on *Hospital Compare* for at least one year, as required by section 1886(o)(2)(C)(i) of the Act. We note the HAC Reduction and Hospital Readmissions Reduction Programs do not have any similar statutory

requirements in this regard as the Hospital VBP Program. We therefore disagree that these removals could result in harm, undue hardship, or financial penalties to hospitals because they do not alter the processes associated with adopting new measures into the Hospital VBP, HAC Reduction, or Hospital Readmissions Reduction Programs. We will, however, continue to consider on a case-by-case basis for each new measure whether it would be appropriate to propose the measure for the Hospital IQR Program before proposing to use it in either the HAC Reduction Program or the Hospital Readmissions Reduction Program. We also note that we assess the reliability and validity of measures before proposing to adopt them into any program, and will continue to do so.

After consideration of the public comments we received, we are finalizing our proposal to remove the Medicare Spending Per Beneficiary – Hospital (NQF #2158) (MSPB) measure from the Hospital IQR Program, beginning with the FY 2020 payment determination as proposed.

#### (7) Clinical Episode-Based Payment Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20479 through 20480), we proposed to remove six clinical episode-based payment measures from the Hospital IQR Program beginning with the FY 2020 payment determination:

- Cellulitis Clinical Episode-Based Payment Measure (Cellulitis Payment) (adopted at 80 FR 49664 through 49674);
- Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure (GI Payment) (adopted at 80 FR 49664 through 49674);

- Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure (Kidney/UTI Payment) (adopted at 80 FR 49664 through 49674);
  - Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure (AA Payment) (adopted at 81 FR 57133 through 57142);
  - Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure (Chole and CDE Payment) (adopted at 81 FR 57133 through 57142);
- and
- Spinal Fusion Clinical Episode-Based Payment Measure (SFusion Payment) (adopted at 81 FR 57133 through 57142).

We proposed to remove the Cellulitis Payment, GI Payment, Kidney/UTI Payment, AA Payment, Chole and CDE Payment, and SFusion Payment measures under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We refer readers to section VIII.A.4.b. of the preamble of this final rule where we discuss examples of the costs associated with implementing and maintaining these measures for the programs. Specifically, maintaining the specifications for the measure, as well as the tools we need to analyze and publicly report the measure data result in costs to CMS. We believe the costs associated with interpreting the requirements for multiple measures with overlapping data points outweigh the benefit to beneficiaries and providers of the additional information provided by these measures, because the measure data are already captured within the overall hospital MSPB measure, which will be retained in the Hospital VBP Program.

These measures are clinically coherent groupings of health care services that can be used to assess providers' resource use associated with the clinically coherent groupings (80 FR 49664). Specifically, these measures all use Part A and Part B Medicare administrative claims data from Medicare FFS beneficiaries hospitalized for a clinical issue associated with the respective clinical groupings (80 FR 49664 through 49668; 81 FR 57133 through 57140). However, these data also are captured in the MSPB measure, which uses claims data for hospital discharges, including Medicare Part A and Part B payments for services rendered to Medicare beneficiaries during the Medicare spending per beneficiary episode surrounding an index hospitalization (76 FR 51618 through 51627). Although the MSPB measure does not provide the same level of granularity that these individual measures do, the most essential data elements will be captured by and publicly reported under the MSPB measure in the Hospital VBP Program. We understand that some hospitals may appreciate receiving more granular payment measure data from individual episode-based payment measures, while other hospitals may not benefit from the use of individual measures in addition to MSPB because they do not have a sufficient number of cases for those measures to be calculated. We proposed to remove these measures because we believe that in balancing the costs of keeping these measures in the program compared to the benefit, providers would prefer to focus their improvement efforts on total payment, rather than both total payment and the payments associated with these individual types of clinical episodes. While we proposed to remove the MSPB measure from the Hospital IQR Program as discussed in the section above, the measure would continue to be included in the Hospital

VBP Program (section IV.I.2.e. of the preamble of this final rule). We also note that the Hospital IQR Program will retain certain condition- and procedure-specific payment measures (specifically, focusing on patients hospitalized for heart failure, AMI, pneumonia, and elective hip and/or knee replacement procedures) with readmissions and mortality measure data for the same patient cohorts. Since the MSPB measure would still be reported for the Hospital VBP Program, patients, hospitals, and the public would continue to receive information about the data provided by these resource measures. Thus, removing these six measures from the Hospital IQR Program would help to reduce duplicative data and produce a more harmonized and streamlined measure set. Further, and as explained above, the Hospital VBP Program's incentive payment structure ties hospitals' payment adjustments on claims paid under the IPPS to their performance on selected quality measures, including the MSPB measure, sufficiently incentivizing performance improvement on this measure among participating hospitals.

As discussed in section VIII.A.4.b. of the preamble of this final rule, above, one of our main goals is to move forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, and we believe that removing these measures from the Hospital IQR Program helps achieve that goal. We recognize, however, that including specific episode-based payment measure data can provide hospitals with actionable feedback to better equip them to implement targeted improvements in comparison to an overall payment measure. In addition, these measures were only recently implemented in the Hospital IQR Program in the FY 2017

IPPS/LTCH PPS final rule and data have not yet become publicly available on the *Hospital Compare* website. However, because these episode-based payment measures are not tied directly with other clinical quality measures that could contribute to the overall picture of providers' clinical effectiveness and efficiency, we believe that the data derived from these measures may be of lower utility to patients in deciding where to seek care, as well as to providers in gaining feedback to reduce cost and improve efficiency while maintaining high quality care; they address resource use which is not directly tied to clinical quality, unless combined with other clinical quality measures (81 FR 57133 through 57134).

Therefore, we proposed to remove the Cellulitis Payment, GI Payment, Kidney/UTI Payment, AA Payment, Chole and CDE Payment, and SFusion Payment measures for the FY 2020 payment determination (which applies to the performance period of January 1, 2018 through December 31, 2018) and subsequent years. Because these are claims-based measures, operationally, we are able to remove them sooner than certain other measures we proposed for removal in the proposed rule.

We invited public comment on our proposal to remove these measures from the Hospital IQR Program as well as feedback on whether there are reasons to retain one or more of the measures in the Hospital IQR Program.

Comment: A number of commenters supported CMS' proposals to remove the clinical episode-based payment measures from the Hospital IQR Program. These commenters asserted that these clinical episode-based payment measures are of limited value to beneficiaries because without being tied directly to corresponding clinical

quality measures, these measures only address resource use, and cost alone does not provide sufficient data for an assessment of the value of care provided. A few commenters also expressed support for removal of the clinical episode-based payment measures due to their overlap with the MSPB measure. One commenter asserted that the clinical episode-based payment measures should be removed because the commenter believes they have not been adequately assessed to address methodological issues such as attribution and the lack of social risk factor adjustments.

Response: We thank the commenters for their support, and appreciate the feedback on additional considerations for removing the clinical episode-based payment measures from the Hospital IQR Program. While we continue to believe that these measures as specified are valid and reliable as discussed in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49660 through 49661; 80 FR 49664 through 49674) and the FY 2017 IPPS/LTCH PPS final rule (81 FR 57133 through 57142), we are finalizing their removal because we believe the costs outweigh the benefits supporting the continued use of these measures in the Hospital IQR Program. We also refer readers to section VIII.A.10. of the preamble of this final rule for a discussion of our ongoing efforts to account for social risk factors in the Hospital IQR Program.

Comment: One commenter expressed particular support for CMS' proposal to remove the Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure (AA Payment) from the Hospital IQR Program. The commenter noted that the measure was not supported by the MAP for adoption in the Hospital IQR Program and is not NQF-endorsed, and further stated their belief that due to the high rate of innovation and

the ongoing introduction of new technologies and medical devices for treatment of aortic aneurysms, it is not an appropriate clinical area for cost measurement.

Response: We thank the commenter for its support.

Comment: A few commenters supported CMS' proposal to remove the Spinal Fusion Clinical Episode-Based Payment Measure (SFusion Payment) from the Hospital IQR Program. One commenter supported removal because the measure data are captured within the overall hospital MSPB measure, which will be retained in the Hospital VBP Program. Another commenter specifically supported removal because the data derived from this clinical episode-based payment measure, in its current form, may be of lower utility to patients and providers since the measure is not tied directly with any other clinical quality measures, and thus does not provide a complete picture of providers' clinical effectiveness and efficiency.

Response: We thank the commenters for their support.

Comment: A few commenters did not support CMS' proposals to remove the clinical episode-based payment measures from the Hospital IQR Program because these commenters believe the MSPB measure, which is being retained in the Hospital VBP Program, is too broad of a measure to tie to specific existing quality measures and too general to be meaningful to providers. One commenter noted the lack of a demonstrated linkage between spending and outcomes under the MSPB measure. Some commenters also noted that the clinical episode-based payment measures allow hospitals to receive more precise and contextual data on healthcare costs, and asserted that this information cannot be derived from the MSPB measure. One commenter stated that the clinical

episode-based payment measures, while not currently linked to corresponding clinical quality measures, have the potential to improve coordination and transitions of care and thereby increase the efficiency of care across the full continuum.

Response: We thank the commenters for their feedback. We understand commenters' appreciation for the more granular payment measure data derived from individual clinical episode-based payment measures rather than the MSPB measure, as we recognize that specific clinical episode-based payment measure data can provide hospitals with actionable feedback to better equip them to implement targeted improvements in comparison to an overall payment measure. However, we also understand that other hospitals may not benefit from the use of individual clinical episode-based payment measures because they lack a sufficient number of cases for those measures to be calculated. Although the MSPB measure does not provide the same level of granularity as the individual clinical episode-based payment measures, we believe the most essential data elements are captured by and publicly reported under the MSPB measure in the Hospital VBP Program. As stated in the proposed rule, we believe that in balancing the costs of keeping these measures in the program compared to the benefit, providers would prefer to focus their improvement efforts on total payment, rather than both total payment and the payments associated with these specific types of clinical episodes. Furthermore, while we recognize the MSPB<sup>280</sup> measure is not currently tied to a specific existing quality measure, we respectfully disagree with commenters' assertions that the measure is too general to be meaningful to providers, as we continue to believe

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<sup>280</sup> For a detailed discussion of our adoption of the MSPB measure in the Hospital IQR Program, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51618 through 51627).

the MSPB measure provides valuable information that captures a wide range of services provided in the inpatient hospital setting and immediately post-discharge, and addresses the Meaningful Measures Initiative priority of making care affordable, which is why we will continue to use this measure in the Hospital VBP Program.

Finally, we agree that the clinical episode-based payment measures, if tied to corresponding clinical quality measures, have the potential to improve coordination and transitions of care and thereby increase the efficiency of care across the full continuum, and will take these recommendations into consideration for future program years. However, as the clinical episode-based payment measures are not currently tied directly to other clinical quality measures, we believe that the data derived from these measures may be of lower utility to patients in deciding where to seek care, as well as to providers in receiving feedback to reduce cost and improve efficiency while maintaining high quality care.

After consideration of the public comments we received, we are finalizing our proposal as proposed to remove the six clinical episode-based payment measures from the Hospital IQR Program beginning with the FY 2020 payment determination: (1) Cellulitis Clinical Episode-Based Payment Measure (Cellulitis Payment); (2) Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure (GI Payment); (3) Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure (Kidney/UTI Payment); (4) Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure (AA Payment); (5) Cholecystectomy and Common Duct Exploration Clinical

Episode-Based Payment Measure (Chole and CDE Payment); and (6) Spinal Fusion Clinical Episode-Based Payment Measure (SFusion Payment).

(8) Chart-Abstracted Clinical Process of Care Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20480 through 20481), we proposed to remove the Influenza Immunization, Incidence of Potentially Preventable Venous Thromboembolism, Median Time from ED Arrival to ED Departure for Admitted ED Patients, and Admit Decision Time to ED Departure Time for Admitted Patients measures as discussed in detail below. Manual abstraction of these chart-abstracted measures is highly burdensome. We have previously stated our intent to move away from chart-abstracted measures in order to reduce this information collection burden (78 FR 50808; 79 FR 50242; 80 FR 49693). We refer readers to our discussion below and to section XIV.B.3.b. of the preamble of the proposed rule, where we discuss the information collection burden associated with each of these measures with greater specificity.

We invited public comment on our proposals and received the following general comments. Measure-specific comments are discussed further below.

Comment: Several commenters supported CMS' proposal to remove the chart-abstracted Clinical Process of Care (CPOC) measures IMM-2, VTE-2, ED-1, and ED-2 because they are duplicative to measures in other programs and are burdensome to report. Commenters noted that measures should provide value in data generated in proportion to intensity of data collection effort. A few commenters expressed that while they supported the removal of these particular CPOC measures, they are not opposed to

the use of chart-abstraction to gather data when necessary to achieve quality improvement goals, even though this data collection method represents the greatest reporting burden for hospitals. One commenter supported removal of the CPOC measures, but expressed concern about the SEP-1 Sepsis Management Bundle being the only measure subject to validation in the Hospital IQR Program because SEP-1 is extremely complex and a relatively new measure.

Response: We thank the commenters for their support and appreciate the feedback regarding the potential future adoption of chart-abstracted measures when necessary to achieve important quality improvement goals. We agree with commenters that removal of these four chart-abstracted CPOC measures from the Hospital IQR Program will reduce reporting burden for hospitals, and we note that their removal will also reduce the costs and burden related to the validation of these measures, so that hospitals may direct resources to more meaningful measures such as the SEP-1 measure, which hospitals began reporting under the Hospital IQR Program with 4<sup>th</sup> quarter 2015 data. While we acknowledge the commenter's concern about the SEP-1 measure remaining as the only measure subject to chart-abstracted validation under the Hospital IQR Program, we note that the SEP-1 measure has been a part of the Hospital IQR Program for a number of years,<sup>281</sup> which we believe has given hospitals sufficient time to become familiar with the reporting and validation requirements for this measure to ensure they are accurately reporting data for this measure. Furthermore, because ensuring proper and timely care for patients with severe sepsis and septic shock aligns with the

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<sup>281</sup> We refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50236 through 50241), where the SEP-1 measure was adopted into the Hospital IQR Program.

Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care, we believe it is appropriate to continue incentivizing proper reporting of sepsis measure data through our current data validation policies.

Comment: One commenter did not support CMS' proposals to remove the IMM-2, ED-1, and ED-2 measures because it stated that these measures are part of the core measure set for the Medicare Beneficiary Quality Improvement Project (MBQIP) administered by HRSA, and they are both relevant to rural care delivery and resistant to low case volume. The commenter noted that removal of these measures would leave CAHs with very limited options in terms of relevant inpatient metrics for engagement in public reporting and demonstrating quality.

Response: We acknowledge that facilitating quality improvement for rural hospitals and CAHs presents unique challenges and is a high priority under the Meaningful Measures Initiative. However, as discussed in the proposed rule, in assessing the continued use of these specific measures in the Hospital IQR Program, we determined that the costs associated with these measures, particularly the data collection burden for hospitals, outweigh the benefit of their continued use in the program. We note that the eCQM version of ED-2 remains available under the Hospital IQR Program, as well as the Promoting Interoperability Program's eCQM measure set for reporting by CAHs. In addition, we are exploring opportunities to develop more relevant measures and less burdensome methods to collect quality measure data for use by small and rural hospitals. For more information about quality measurement efforts for rural health settings, we refer readers to the MAP Rural Health Workgroup at:

[http://www.qualityforum.org/MAP\\_Rural\\_Health\\_Workgroup.aspx](http://www.qualityforum.org/MAP_Rural_Health_Workgroup.aspx). For more information about the reporting and use of MBQIP data, including the MBQIP measure set, we refer readers to the National Rural Health Resource Center at: <https://www.ruralcenter.org/tasc/mbqip/data-reporting-and-use>.

Comment: One commenter requested clarification about whether the 2018 eCQM reporting requirements also means that CAHs are required to submit chart-abstracted measures to the Hospital IQR Program.

Response: We clarify that under section 1886(b)(3)(B)(viii) of the Act, only subsection (d) hospitals are required to submit data to the Hospital IQR Program. CAHs are neither required to submit chart abstracted measure data to the Hospital IQR Program, nor subject to any payment reduction. CAHs participating in the Promoting Interoperability Programs have eCQM reporting requirements with respect to those programs; we refer readers to section VIII.D. of the preamble of this final rule where that is discussed.

(a) Influenza Immunization Measure (NQF #1659) (IMM-2)

We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50211) where we adopted the Influenza Immunization measure (NQF #1659) (IMM-2). In the proposed rule, we proposed to remove IMM-2 beginning with the CY 2019 reporting period/FY 2021 payment determination under removal Factor 1 – topped-out measure and under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

Hospital performance on IMM-2 is statistically “topped-out” – removal Factor 1. The Hospital IQR Program previously finalized two criteria for determining when a measure is “topped out”: (1) when there is statistically indistinguishable performance at the 75<sup>th</sup> and 90<sup>th</sup> percentiles; and (2) when the measure’s truncated coefficient of variation is less than or equal to 0.10 (79 FR 50203). Our analysis indicates that performance on this measure has been topped-out for the past three payment determination years and also for Q1 and Q2 of 2017 encounters. This analysis is captured by the table below:

<b>Payment Determination</b>	<b>Encounters</b>	<b>Number of Hospitals</b>	<b>Mean</b>	<b>75<sup>th</sup> Percentile</b>	<b>90<sup>th</sup> Percentile</b>	<b>Truncated COV</b>
FY 2016	2014 (Q1-Q4)	3326	0.9292	0.9867	0.9965	0.0560
FY 2017	2015 (Q1-Q4)	3293	0.9372	0.9890	0.9970	0.0494
FY 2018	2016 (Q1-Q4)	3258	0.9370	0.9890	0.9970	0.0500

Our topped-out analysis shows that administration of the influenza vaccination to admitted patients is widely in practice and there is little room for improvement. We believe that hospitals will continue this practice even after the measure is removed; thus, utility in the program is limited.

Moreover, we proposed to remove this measure under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. We believe the information collection burden associated with manual chart abstraction, as discussed above, outweighs the associated benefit to beneficiaries of receiving this information, because: (1) it is topped out and there is little room for improvement (discussed above); and (2) it does not directly measure patient outcomes.

As discussed in section I.A.2. of the preamble of this final rule, one of the goals of the Meaningful Measures Initiative is to reduce costs associated with payment policy, quality measures, documentation requirements, conditions of participation, and health information technology. Another goal of the Meaningful Measures Initiative is to utilize measures that are “outcome-based where possible.” IMM-2 is a process measure that tracks patients assessed and given an influenza vaccination with their consent, but does not directly measure patient outcomes.

We recognize and agree that influenza prevention is an important public health issue. We note that the Influenza Vaccination Coverage Among Healthcare Personnel (HCP) measure (adopted at 76 FR 51631 through 51633), which assesses the percentage of healthcare personnel at a facility who receive the influenza vaccination, remains in the Hospital IQR Program. Although the HCP measure is focused on vaccination of providers and other hospital personnel and not beneficiaries, it promotes improved health outcomes among beneficiaries because: (1) health care personnel that have received the influenza vaccination are less likely to transmit influenza to patients under their care; and (2) vaccination of health care personnel reduces the probability that hospitals may experience staffing shortages as a result of illness that would impact ability to provide adequate patient care. Thus, we believe the costs associated with reporting this chart-abstracted measure outweighs the associated benefits of keeping it in the Hospital IQR Program.

We proposed to remove the IMM-2 measure beginning with the CY 2019 reporting period/FY 2021 payment determination (which applies to the performance

period of January 1, 2019 through December 31, 2019) because hospitals already would have collected and reported data for the first three quarters of the CY 2018 reporting period for the FY 2020 payment determination by the time of publication of the FY 2019 IPPS/LTCH PPS final rule. In addition, there are operational limitations associated with updating CMS systems in time to remove this measure sooner for the CY 2018 reporting period/FY 2020 payment determination. This proposed timeline (that is, beginning with the CY 2019 reporting period/FY 2021 payment determination) would subsequently allow us to use the data already reported by hospitals in the CY 2018 reporting period for public reporting on our *Hospital Compare* website and for data validation.

Therefore, we proposed to remove the IMM-2 measure from the Hospital IQR Program for the CY 2019 reporting period/FY 2021 payment determination and subsequent years.

Comment: Several commenters supported CMS' proposal to remove the chart-abstracted IMM-2 measure because it is topped-out, although they acknowledged vaccination in the hospital is beneficial to protect against the influenza and expressed the hope that removing the IMM-2 measure does not impact overall vaccination efforts and public health efforts during the influenza season. One commenter also noted that the IMM-2 measure does not directly measure patient outcomes.

Response: We thank commenters for their support.

Comment: Several commenters did not support CMS' proposal to remove the chart-abstracted IMM-2 measure because they believed there is still a need for improvement in immunization rates and the measure has significant public health

implications. A few commenters expressed concern that there has been little progress toward the CDC Healthy People 2020 goal of 70 percent for influenza vaccinations with a current rate of 38.1 percent for 2014, and that once measures are removed, performance may deteriorate below the baseline.

Response: We recognize and agree that influenza prevention is an important public health issue. However, even though, as commenters suggest, there is significant room for improvement in nationwide vaccination rates toward the national immunization goals set by CDC Healthy People 2020,<sup>282</sup> the IMM-2 measure is a process measure that tracks only whether inpatients are assessed and given an influenza vaccination with their consent prior to discharge, if indicated. As a result, this measure does not directly assess patient outcomes and is limited to incentivizing immunization of patients admitted to an acute care hospital – a small subset of the total U.S. population. In addition, the IMM-2 measure has been topped-out for the past three reporting periods, indicating the rate of acute care hospitals assessing admitted patients for influenza vaccination is significantly higher than the national average. Because the IMM-2 measure, as specified, is limited to patients admitted to an acute care hospital, we do not believe continued use of this measure is likely to result in additional improvement in rates of influenza vaccination assessment among admitted hospital patients.

Comment: One commenter noted that accountable care organizations (ACOs) are also required to report on an influenza immunization measure. Accordingly, they may be

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<sup>282</sup> For more information about the national immunization goals under CDC Healthy People 2020, we refer readers to: <https://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases>.

able to contract with hospitals to incorporate processes or standing orders to immunize patients for influenza, and the alignment between the measures reported by ACOs and hospitals would reinforce incentives to improve immunization rates. Another commenter suggested that the IMM-2 measure should remain in the Program as a required chart-abstracted measure until such a time that CMS develops an eCQM to replace it.

Response: We appreciate the commenter's suggestion that ACOs may be able to contract with hospitals to incorporate processes to immunize for influenza and the recommendation to develop an eCQM version of IMM-2. We will continue to assess opportunities to address influenza vaccination rates outside of the hospital quality programs or through other types of measures.

Comment: One commenter noted that the rationale to remove the IMM-2 measure from the Hospital IQR Program because the HCP measure will be retained contradicts the rationale to remove the HCP measure from the IPFQR Program.

Response: We disagree with the commenter's assertion that removal of IMM-2 contradicts the rationale to retain the HCP measure in the Hospital IQR Program. We believe that the burden of reporting the HCP measure is greater for IPFs compared to the relative burden for acute care hospitals participating in the hospital quality reporting and value-based purchasing programs. The entire burden of registering for and maintaining access to the CDC's NHSN system for IPFs, especially independent or freestanding IPFs, is due to one measure (HCP); whereas a hospital participating in the hospital quality reporting and value-based purchasing programs, for example, must register and maintain NHSN access for purposes of submitting data for several, not just one, healthcare safety

measures for the hospital quality reporting and value-based purchasing programs in which it participates. Furthermore, because the topic is addressed in other initiatives, such as state laws<sup>283</sup> and employer programs, we believe that the costs and burden of this measure on IPFs, especially independent or freestanding IPFs, outweighs the benefit of retaining the measure in the IPFQR Program.

Comment: A few commenters did not agree with the timing of the removal of IMM-2 because as proposed, the removal does not align with the collection and reporting of IMM-2 data. Commenters noted that immunization data is not collected for the "first three quarters" of the CY reporting period, but rather influenza data is only collected in Q1 and Q4. Therefore, by removing the measure beginning with the CY 2019 reporting period/FY 2021 payment determination, hospitals would already have collected and reported data in Q4 2018, which is half of the measure's flu season.

Response: We recognize that the influenza season spans the winter months from Q4 to Q1 and those are the data used for public reporting purposes on the *Hospital Compare* website, however, data collection occurs on a quarterly basis for the entire calendar year.<sup>284</sup> Therefore, if this measure were to be removed beginning with the CY 2018 reporting period/FY 2020 payment determination, hospitals would already have collected data for Q4 2017 and Q1 2018, as well as Q2 2018 and Q3 2018, but would not receive credit for reporting that information. Although hospitals would only have

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<sup>283</sup> CDC, Menu of State Hospital Influenza Vaccination Laws. Available at: <https://www.cdc.gov/phlp/docs/menu-shfluvacclaws.pdf>.

<sup>284</sup> We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51640 through 51641), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53536 through 53537), and the FY 2014 IPPS/LTCH PPS final rule (78 FR 50811) for details on the Hospital IQR Program data submission requirements for chart-abstracted measures.

collected half of the data that would be used for public reporting purposes by the time of publication of the FY 2019 IPPS/LTCH PPS final rule, removing this measure beginning with the CY 2019 reporting period/FY 2021 payment determination would enable hospitals to get credit for the half-year of data already collected. Therefore, in the interest of ensuring that resources already expended do not go to waste, we believe that removing this measure beginning with the CY 2019 reporting period/FY 2021 payment determination is most appropriate.

After consideration of the public comments we received, we are finalizing our proposal to remove the IMM-2 measure from the Hospital IQR Program for the CY 2019 reporting period/FY 2021 payment determination and subsequent years as proposed.

(b) Incidence of Potentially Preventable Venous Thromboembolism Measure (VTE-6); Median Time from ED Arrival to ED Departure for Admitted ED Patients Measure (NQF #0495) (ED-1); and Admit Decision Time to ED Departure Time for Admitted Patients Measure (NQF #0497) (ED-2)

We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51634 through 51636), where we adopted the Incidence of Potentially Preventable Venous Thromboembolism measure (VTE-6), and to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50210 through 50211), where we adopted both the chart-abstracted version of the Median Time from ED Arrival to ED Departure for Admitted ED Patients measure (NQF #0495) (ED-1) and the Admit Decision Time to ED Departure Time for Admitted Patients measure (NQF #0497) (ED-2). In the proposed rule, we proposed to remove VTE-6 and the chart-abstracted version of ED-1 beginning with the CY 2019 reporting

period/FY 2021 payment determination; in addition, we proposed to remove the chart-abstracted version of ED-2 beginning with the CY 2020 reporting period/FY 2022 payment determination. We proposed to remove these three measures under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

As discussed in section I.A.2. of the preamble of this final rule, one of the goals of our Meaningful Measures Initiative is to reduce costs associated with payment policy, quality measures, documentation requirements, conditions of participation, and health information technology. We believe the information collection burden associated with manual chart abstraction, as discussed above, outweighs the associated benefit to beneficiaries of receiving information provided by these measures because much of the information provided by these measures is available through other Program measure data (as further discussed below).

Furthermore, in the case of ED-2, hospitals still would have the opportunity to submit data since the eCQM version will remain part of the Hospital IQR Program measure set. We note that in section VIII.A.5.b.(9)(c) of the preamble of the proposed rule, we proposed to remove the eCQM version of ED-1, but to retain the eCQM version of ED-2 due to the continued importance of assessing ED wait times for admitted patients. Although ED-1 is an important metric for patients, ED-2 has greater clinical significance for quality improvement because it provides more actionable information such that hospitals have greater ability to allocate resources to consistently reduce the time between decision to admit and time of inpatient admission. Hospitals have

somewhat less control to consistently reduce wait time between ED arrival and decision to admit, as measured by ED-1, due to the need to triage and prioritize more complex or urgent patients. Also, the Hospital OQR Program includes an ED throughput measure, OP-18: Median Time from ED Arrival to ED Departure for Discharged ED Patients (81 FR 79755), which publicly reports similar data as captured by ED-1. Therefore, we believe the costs to providers for submitting data on the chart-abstracted ED-1 and ED-2 measures outweigh the associated benefits of keeping the measures in the program given that other measures in the Hospital IQR Program and in other CMS hospital quality programs are able to capture actionable data on ED wait times.

Furthermore, although the eCQM version of VTE-6 is not included in the Hospital IQR Program, hospitals still would have the opportunity to submit data for two other VTE related measures (eCQMs), which were already adopted in the Hospital IQR Program measure set – Venous Thromboembolism Prophylaxis (VTE-1) (NQF #0371) eCQM (adopted at 78 FR 50809) and Intensive Care Unit Venous Thromboembolism Prophylaxis (VTE-2) (NQF #0372) eCQM (adopted at 78 FR 50809). The VTE-1 eCQM assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission; the VTE-2 eCQM assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or

transfer). The VTE-1 and VTE-2 measures will be retained in the Hospital IQR Program to encourage best clinical practices to those patients in this high risk population by providing prophylactic steps which will decrease the incidence of preventable VTE. In contrast, the VTE-6 measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date. While awareness of the occurrence of preventable VTE is valuable knowledge, the prevention of the initial occurrence is more actionable and meaningful for both providers and beneficiaries. Therefore, we believe the costs to providers of submitting data on this chart-abstracted measure outweigh its limited clinical utility given other VTE measures in the Program are able to capture more actionable data on VTE.

As discussed in section VIII.A.4.b. of the preamble of this final rule, one of our main goals is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients. Therefore, we believe removing the chart-abstracted versions of the VTE-6, ED-1, and ED-2 measures from the Hospital IQR Program measure set helps achieve that goal.

We proposed to remove the VTE-6 measure and chart-abstracted version of the ED-1 measure beginning with the CY 2019 reporting period/FY 2021 payment determination, because hospitals already would have collected and reported data for the first three quarters of the CY 2018 reporting period for the FY 2020 payment determination by the time of publication of the FY 2019 IPPS/LTCH PPS final rule.

Moreover, we would not be able to overcome operational limitations associated with updating our systems in time to support removal of the VTE-6 and chart-abstracted version of the ED-1 measures for the CY 2018 reporting period/FY 2020 payment determination. In addition, we proposed to remove the chart-abstracted version of the ED-2 measure beginning with the CY 2020 reporting period/FY 2022 payment determination, because the first results from validation of ED-2 eCQM data will be available beginning with the FY 2021 payment determination. We believe it is important to keep the chart-abstracted version of ED-2 in the program until after the validated data from the eCQM version of ED-2 is available for comparative analysis to evaluate the accuracy and completeness of the eCQM data. Further, removing these three measures on the proposed timelines would allow us to use the data already reported by hospitals in the CY 2018 reporting period for public reporting on our *Hospital Compare* website and for data validation.

Therefore, we proposed to remove: (1) VTE-6 and the chart-abstracted version of ED-1 beginning with the CY 2019 reporting period/FY 2021 payment determination; and (2) the chart-abstracted version of ED-2 beginning with the CY 2020 reporting period/FY 2022 payment determination.

Comment: A few commenters specifically supported CMS' proposal to remove the chart-abstracted version of the VTE-6 measure because it is burdensome and duplicative of other quality measures. Another commenter supported CMS' proposal to remove the chart-abstracted version of the VTE-6 measure, but disagreed with the rationale using proposed removal Factor 8. Instead, the commenter suggested using

removal Factor 5 - the availability of a measure that is more strongly associated with desired patient outcomes for the particular topic - because the chart-abstracted versions of VTE-1 and VTE-2 measures have previously been removed from the Hospital IQR Program using removal Factor 5.

Response: We thank commenters for their support. With regard to the commenter's suggestion that we remove the VTE-6 measure using removal Factor 5 rather than removal Factor 8, because the chart-abstracted versions of the VTE-1 and VTE-2 measures have previously been removed from the Hospital IQR Program using removal Factor 5, we do not believe this rationale would be appropriate in this case because the eCQM versions of the VTE-1 and VTE-2 measures were retained in the Hospital IQR Program, as the "measures more strongly associated with desired patient outcomes for the particular topic," whereas there is no equivalent eCQM measure to replace VTE-6 remaining in the Program. More generally, we note that applicability of the removal factors is not mutually exclusive and there can be situations where more than one removal factor may apply.

Comment: One commenter suggested that if a related measure replaces the current VTE-6 measure, that the measure steward should modify the list of acceptable VTE risk assessment tools to include the "three-bucket" Risk Assessment Model (RAM).

Response: The "three-bucket" RAM is a tool that allows hospital providers to categorize patients into one of three groups based on whether they are at low, moderate,

or high risk of getting a VTE.<sup>285</sup> The VTE RAM is completed by the physician in a simple order sheet on admission, post-op, and/or transfer. We thank the commenter for its suggestion to modify the list of acceptable VTE risk assessment tools, should we propose a new VTE measure in future rulemaking to replace VTE-6. However, we note that at this time we have no plans to add additional VTE measures to the Hospital IQR Program. We will take this suggestion into consideration if additional VTE measures are proposed for addition to the Hospital IQR Program in the future.

Comment: Another commenter supported CMS' proposal to remove the current VTE-6 measure, but recommended the measure be revised and readopted as an eCQM because it is a clinically important issue, relevant for purposes of improving the quality of care provided in the acute care setting, and one of few outcome measures in the Program. This commenter acknowledged that the cost of the chart-abstracted version of the VTE-6 measure outweighs the benefit of its continued use; however, abstraction burden would be reduced and the measure more cost-effective as an eCQM. The commenter suggested that an eCQM could capture VTE prevention process failures during the hospital stay by measuring an undesirable outcome as patients who are not assessed for VTE risk, not prescribed prophylaxis, miss one or more doses of prescribed prophylaxis, and develop a pulmonary embolism or VTE during the hospitalization. In addition, the commenter urged development of a risk-adjustment model for an eCQM version of the VTE-6 measure, since this is an outcome measure.

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<sup>285</sup> Venous Thromboembolism (VTE) Prevention in the Hospital, AHRQ. Available at: <https://archive.ahrq.gov/professionals/quality-patient-safety/quality-resources/value/vtepresentation/maynardtxt.html>.

Response: We will continue to assess opportunities to address this clinically important issue through other types of measures. We note, however, that a VTE-6 eCQM was previously adopted in the Hospital IQR Program (78 FR 50784) and subsequently removed (81 FR 57120) because a majority of hospitals did not have the ability to capture required data elements, such as diagnostic study results/reports and location of the specific vein in which deep vein thrombosis was diagnosed, in discrete structured data fields to support these eCQMs, because they are often found as free text in clinical notes instead. We also note that we are removing the VTE-6 measure because the VTE-1 and VTE-2 eCQMs will be retained in the Hospital IQR Program to encourage best clinical practices to those patients in this high risk population by providing prophylactic steps which will decrease the incidence of preventable VTE.

Comment: Several commenters supported CMS' proposals to remove the chart-abstracted versions of the ED-1 and ED-2 measures to reduce costs and eliminate overlapping reporting requirements between eCQM and chart-abstracted versions of the same measures. One commenter supported CMS' proposal to remove the chart-abstracted versions of the ED-1 and ED-2 measures, but disagreed with the rationale using proposed removal Factor 8. Instead, the commenter suggested using removal Factor 5 - the availability of a measure that is more strongly associated with desired patient outcomes for the particular topic - because the eCQM versions of ED-1 and ED-2 represent measures "that is more strongly associated with desired patient outcomes for the particular topic."

Response: We thank the commenters for their support of these removals. We appreciate the commenters' recommendation to remove these measures under removal Factor 5; however, because we are finalizing our proposal to remove the ED-1 eCQM, Factor 5 would not apply to the removal of the chart-abstracted version of the ED-1 measure. We further believe removal Factor 8 is an appropriate removal factor for this measure. More generally, we note that applicability of the removal factors is not mutually exclusive and there can be situations where more than one removal factor may apply.

Comment: One commenter supported CMS' proposal to remove the chart-abstracted version of the ED-1 measure beginning with the CY 2019 reporting period/FY 2021 payment determination and the chart-abstracted version of the ED-2 measure beginning with the CY 2020 reporting period/FY 2022 payment determination, as proposed, in order to complete the validation process for the eCQM versions of the measure and to compare to chart-abstracted measure results before removing the chart-abstracted version of ED-2. Several commenters supported CMS' proposal to remove the chart-abstracted versions of the ED-1 and ED-2 measures, but encouraged CMS to remove both measures in the same year. These commenters argued that the patient's chart must still be reviewed for the ED-2 measure, even when the chart-abstracted version of the ED-1 measure is retired and therefore, retiring one before the other does not reduce provider burden or workload.

Response: We thank the commenter that supported removing the chart-abstracted versions of the ED-1 and ED-2 measures on the proposed timeline and agree that it is a

benefit to complete the validation process for the eCQM versus chart-abstracted measure before removing the chart-abstracted version of the ED-2 measure. We appreciate the commenters' position that the chart-abstracted versions of the ED-1 and ED-2 measures should be removed in the same year; however, we disagree that removing one measure before the other will not reduce provider burden. We acknowledge that patient charts will still need to be abstracted to report on the chart-abstracted version of the ED-2 measure up to the CY 2020 reporting period/FY 2022 payment determination, however, the abstractors would only need to review the charts for the ED-2 measure elements, and not the ED-1 elements, which we believe will result in some reduction in provider cost.

Comment: One commenter noted that comparison of ED-2 eCQM data with the ED-2 chart-abstracted data is not feasible because many organizations sample chart-abstracted data due to the large volume of patients, meaning analysis would be comparing the median time of approximately 90 cases per quarter versus over 10,000 eCQM cases. The commenter expressed concern that the median values between the two sets never match and can vary greatly. In addition, the specifications for the admit date/time do not match as the eCQM is limited to selecting a specific data field typically from a registration system and the chart-abstracted version requires an abstractor to take the first documented time in the chart.

Response: We thank the commenter for its feedback on the challenges of direct comparisons between the chart-abstracted and the eCQM versions of the ED-2 measure. We will continue to review and take these concerns into consideration.

Comment: A few commenters did not support CMS' proposals to remove the chart-abstracted versions of the ED-1 and ED-2 measures because the Maryland Health Services Cost Review Commission uses these measures to incentivize progress in improving ED wait times.

Response: We acknowledge the commenters' concern. We clarify that Maryland hospitals do not participate in the Hospital IQR Program, though they do report data pursuant to the all-payer model agreement.<sup>286</sup> We also refer readers to the FY 2010 IPPS/LTCH PPS final rule (74 FR 43881) and FY 2014 IPPS/LTCH PPS final rule (78 FR 50789) for more detailed discussions of Maryland hospitals in relation to the Hospital IQR Program. As discussed in the proposed rule, in assessing the continued use of these specific measures in the Hospital IQR Program, we determined that the costs associated with these measures, particularly the data collection burden for hospitals, outweigh the benefit of their continued use in the program. However, we note that the removal of these measures from the Hospital IQR Program does not preclude their use in other CMS and non-CMS quality programs.

After consideration of the public comments we received, we are finalizing our proposals to remove the VTE-6 measure and the chart-abstracted version of ED-1 beginning with the CY 2019 reporting period/FY 2021 payment determination and the chart-abstracted version of ED-2 beginning with the CY 2020 reporting period/FY 2022 payment determination, as proposed.

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<sup>286</sup> For more information regarding the Maryland All-Payer Model, we refer readers to: <https://innovation.cms.gov/initiatives/Maryland-All-Payer-Model/>.

(9) Removal of Electronic Clinical Quality Measures (eCQMs)

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20481 through 20484), in alignment with the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) for eligible hospitals and CAHs, we proposed to reduce the number of electronic Clinical Quality Measures (eCQMs) in the Hospital IQR Program eCQM measure set from which hospitals must select four to report, by proposing to remove seven eCQMs (of the 15 measures currently in the measure set) beginning with the CY 2020 reporting period/FY 2022 payment determination. The seven eCQMs we proposed to remove are:

- Primary PCI Received Within 90 Minutes of Hospital Arrival (AMI-8a) (adopted at 79 FR 50246);
- Home Management Plan of Care Document Given to Patient/Caregiver (CAC-3) (adopted at 79 FR 50243 through 50244);
- Median Time from ED Arrival to ED Departure for Admitted ED Patients (NQF #0495) (ED-1) (adopted at 78 FR 50807 through 50710);
- Hearing Screening Prior to Hospital Discharge (NQF #1354) (EHDI-1a) (adopted at 79 FR 50242);
- Elective Delivery (NQF #0469) (PC-01) (adopted at 78 FR 50807 through 50810);
- Stroke Education (STK-08) (adopted at 78 FR 50807 through 50810); and
- Assessed for Rehabilitation (NQF #0441) (STK-10) (adopted at 78 FR 50807 through 50810).

We proposed to remove all seven eCQMs under proposed removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program. As discussed in section I.A.2. of the preamble of this final rule, two of the goals of our Meaningful Measures Initiative are to: (1) reduce costs associated with payment policy, quality measures, documentation requirements, conditions of participation, and health information technology; and (2) to apply a parsimonious set of the most meaningful measures available to track patient outcomes and impact. In section VIII.A.11.d.(2) of the preamble of this final rule, for the CY 2019 reporting period/FY 2021 payment determination, we discuss our proposal to extend the same eCQM reporting requirements finalized for the CY 2018 reporting period/FY 2020 payment determination, such that hospitals submit one, self-selected calendar quarter of data on four self-selected eCQMs. Thus, we anticipate the collection of information burden associated with eCQM data reporting for the CY 2019 reporting period/FY 2021 payment determination will be the same as for the CY 2018 reporting period/FY 2020 payment determination. However, in section VIII.A.4.b. of the preamble of this final rule, we discuss our belief that costs associated with program requirements are multi-faceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the measures for the Program, such as staying current on clinical guidelines and maintaining measure specifications in hospitals' EHR systems for all of the eCQMs available for use in the Hospital IQR Program. With respect to eCQMs, we believe that a coordinated reduction in the overall number of eCQMs in both the Hospital IQR and Medicare and Medicaid Promoting Interoperability Programs (previously known as the

Medicare and Medicaid EHR Incentive Programs) would reduce costs and improve the quality of reported data by enabling hospitals to focus on a smaller, more specific subset of eCQMs, while still allowing hospitals some flexibility to select which eCQMs to report that best reflect their patient populations and support internal quality improvement efforts. We refer readers to the FY 2017 IPPS/LTCH PPS final rule (81 FR 57116 through 57120) where we previously removed 13 eCQMs from the eCQM measure set in order to develop a smaller, more specific subset of eCQMs.

In order to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, we believe it is appropriate to propose to remove additional eCQMs at this time to develop an even more streamlined set of the most meaningful eCQMs for hospitals. In selecting which eCQMs to propose for removal, we considered the relative benefits and costs associated with each eCQM in the measure set. Individual eCQMs are discussed in more detail below.

(a) AMI-8a

We proposed to remove AMI-8a because the costs associated with implementing and maintaining this eCQM outweigh the associated benefit to beneficiaries because too few hospitals select to report on this measure. Only a single hospital reported on this measure for the CY 2016 reporting period. Because we do not receive enough data to conduct meaningful, statistically significant analysis, we believe the costs of maintaining

this measure in the Program outweigh any associated benefit to patients, consumers, and providers – proposed removal Factor 8.

(b) CAC-3, STK-08, and STK-10

We proposed to remove the CAC-3, STK-08, and STK-10 eCQMs, because we believe the costs associated with implementing and maintaining these eCQMs outweigh the benefit to beneficiaries because they do not provide information evaluating the clinical quality of the activity. Home Management Plan of Care Document Given to Patient/Caregiver (CAC-3) assesses the proportion of pediatric asthma patients discharged from an inpatient hospital stay with a Home Management Plan of Care (HMPC) document given to the pediatric asthma patient/caregiver. Stroke Education (STK-08) captures ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay and at discharge. Assessed for Rehabilitation (STK-10) captures ischemic or hemorrhagic stroke patients who were assessed for rehabilitation.

We have issued guidance that measure developers should avoid selecting or constructing measures that can be met primarily through documentation without evaluating the clinical quality of the activity—often satisfied with a checkbox, date, or code—for example, a completed assessment, care plan, or delivered instruction.<sup>287</sup> CAC-3, STK-08, and STK-10 are examples of those types of measures. In our effort to create a more parsimonious measure set, we assessed which measures are the least costly to report

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<sup>287</sup> <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Downloads/Blueprint-120.pdf>.

and most effective in particular priority areas, including stroke, and we believe these measures provide less benefit to providers and Beneficiaries, relative to their costs.

Furthermore, we stated that if our proposals to remove the STK-08 and STK-10 eQMs are finalized as proposed, we believe the resulting set of four stroke eQMs (STK-02, STK-03, STK-05, and STK-06) will be more meaningful to both patients and providers because they capture the proportion of ischemic stroke patients who are prescribed a statin medication,<sup>288</sup> specific anti-thrombolytic therapy,<sup>289</sup> and/or anticoagulation therapy<sup>290</sup> at hospital discharges, which would address follow-up care and promote future preventative actions. Moreover, these remaining stroke eQMs continue to be meaningful because ischemic strokes account for 87 percent of all strokes, and strokes are the fifth leading cause of death and disability.<sup>291</sup> We also note that the STK-08 and STK-10 eQMs already have been removed from The Joint Commission's eQM measure set.<sup>292</sup>

(c) ED-1

We proposed to remove the Median Time from ED Arrival to ED Departure for Admitted ED Patients (ED-1) eQM because we believe that among the ED measures in the eQM measure set, Admit Decision Time to ED Departure Time for Admitted Patients (ED-2) is more effective at driving quality improvement. We note that in section VIII.A.5.b.(8)(b) of the preamble of the proposed rule, we proposed to remove the chart-

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<sup>288</sup> Measure specifications for STK-06 are available at: <https://ecqi.healthit.gov/ecqm/measures/cms105v6>.

<sup>289</sup> Measure specifications for STK-02 and STK-05 are available at:

<https://ecqi.healthit.gov/ecqm/measures/cms104v6> and <https://ecqi.healthit.gov/ecqm/measures/cms072v6>.

<sup>290</sup> Measure specifications for STK-03 available at: <https://ecqi.healthit.gov/ecqm/measures/cms071v7>.

<sup>291</sup> [http://www.strokeassociation.org/STROKEORG/AboutStroke/Impact-of-Stroke-Stroke-statistics\\_UCM\\_310728\\_Article.jsp](http://www.strokeassociation.org/STROKEORG/AboutStroke/Impact-of-Stroke-Stroke-statistics_UCM_310728_Article.jsp).

<sup>292</sup> [https://www.jointcommission.org/the\\_joint\\_commission\\_measures\\_effective\\_january\\_1\\_2018/](https://www.jointcommission.org/the_joint_commission_measures_effective_january_1_2018/).

abstracted versions of ED-1 and ED-2. As stated above, we believe that although ED-1 is an important metric for patients, ED-2 has greater clinical significance for quality improvement because it provides more actionable information – hospitals have greater ability to allocate resources and align inter-departmental communication to consistently reduce the time between decision to admit and time of inpatient admission. Hospitals have somewhat less ability to consistently reduce wait time between ED arrival and decision to admit, as measured by ED-1, due to the need to triage and prioritize more complex or urgent patients, which might inadvertently prolong ED wait times for less urgent patients. Also, the Hospital OQR Program includes an ED throughput measure, OP-18: Median Time from ED Arrival to ED Departure for Discharged ED Patients (81 FR 79755), which publicly reports similar data as captured by ED-1. Therefore, we believe the costs of implementing and maintaining the eCQM, as discussed above, outweigh the limited benefits of keeping the measure in the Program given that other measures in the Hospital IQR Program and in other CMS hospital quality programs are able to capture actionable data on ED wait times.

(d) EHDI-1a

We proposed to remove the EHDI-1a eCQM because we believe the costs associated with implementing and maintaining the measure, as discussed above, outweigh the benefits to beneficiaries because newborn hearing screening is already widely practiced by hospitals as the standard of care and already mandated by many State laws. Forty-three States currently have statutes or rules related to newborn hearing screening

and 28 of the 43 States require babies to be screened.<sup>293</sup> Thus, this measure may be duplicative with local regulations for most hospitals. Therefore, we believe the costs associated with the measure outweigh the associated benefits of keeping the measure in the Hospital IQR Program.

(e) PC-01

We proposed to remove the eCQM version of PC-01. Due to the importance of child and maternal health, we did not propose to also remove the chart-abstracted version of the measure because we believe all hospitals with a sufficient number of cases should be required to report data on this measure (adopted at 77 FR 53530). Although we have expressed in section XIII.A.4.b.ii.(8) of the preamble of the proposed rule our intent to move away from the use of chart-abstracted measures in quality reporting programs, our previously adopted policy requires that hospitals should need less time to submit data for this measure because, unlike the other chart-abstracted measures, hospitals are only required to submit several aggregate counts instead of potentially numerous patient-level charts. We note that submission of this measure places less information collection burden on hospitals than the other chart-abstracted measures because of the ease with which hospitals can simply submit their aggregate counts using our Web-Based Measure Tool through the QualityNet website (77 FR 53537). In addition, if the chart-abstracted version of this measure were removed from the Program, and hospitals could only elect to report the eCQM version of this measure as one of four required eCQMs, we believe that due to the low volume of patients relative to total adult hospital population, we

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<sup>293</sup> [http://www.infanthearing.org/ehdi-ebook/2017\\_ebook/1b%20Chapter1EvolutionEHDI2017.pdf](http://www.infanthearing.org/ehdi-ebook/2017_ebook/1b%20Chapter1EvolutionEHDI2017.pdf).

would not receive enough data to produce meaningful analyses. Also, PC-01 is one of only two measures of child and maternal health in the Hospital IQR Program measure set (PC-05 eCQM being the other) and since eCQM data are not currently publicly reported, the chart-abstracted version of PC-01 is currently the only publicly reported measure of child and maternal health in the Program. However, retaining this measure in both eCQM and chart-abstracted form may be duplicative and costly. Consequently, we proposed to remove the eCQM version of PC-01 while retaining the chart-abstracted version of PC-01.

Therefore, we believe the costs associated with implementing and maintaining the eCQM, as discussed above, outweigh the associated benefit to beneficiaries because the information is already collected and publicly reported in the chart-abstracted form of this measure for the Hospital IQR Program.

Thus, we proposed to remove seven eCQMs as discussed above beginning with the CY 2020 reporting period/FY 2022 payment determination. If our proposals are finalized as proposed, the eCQMs remaining in the eCQM measure set would focus on: (a) ED wait times for admitted patients (ED-2), which addresses the Meaningful Measures Initiative quality priority of promoting effective communication and coordination of care; (b) Exclusive Breast Milk Feeding (PC-05), which addresses the Meaningful Measures Initiative quality priority that care is personalized and aligned with patients' goals; and (c) stroke care (STK-02, STK-03, STK-05, and STK-06) and VTE care (VTE-1 and VTE-2), which address the Meaningful Measures Initiative quality priority of promoting effective prevention and treatment.

In crafting our proposals to remove these seven eCQMs from the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination and subsequent years, we also considered proposing to remove these seven eCQMs one year earlier, beginning with the CY 2019 reporting period/FY 2021 payment determination. We establish program requirements considering all hospitals that participate in the Hospital IQR Program at a national level, which involves a wide spectrum of capabilities and resources with respect to eCQM reporting. In establishing our eCQM policies, we must balance the needs of hospitals with variable preferences and capabilities. Overall, across the range of capabilities and resources for eCQM reporting, stakeholders have expressed that they want more time to prepare for eCQM changes. Specifically, as noted in the FY 2018 IPPS/LTCH PPS final rule, we have continued to receive frequent feedback (via email, webinar questions, help desk questions, and conference call discussions) from hospitals and health IT vendors about ongoing challenges of implementing eCQM reporting, including, “a need for at least one year between new EHR requirements due to the varying 6- to 24-month cycles needed for vendors to code new measures, test and institute measure updates, train hospital staff, and rollout other upgraded features (82 FR 38355).”

We recognize that some hospitals and health IT vendors may prefer earlier removal in order to forgo maintenance on those eCQMs proposed for removal. In preparation for the proposed rule, we weighed the relative burdens and costs associated with removing these measures beginning with the CY 2019 reporting period/FY 2021 payment determination or beginning with the CY 2020 reporting period/FY 2022

payment determination. Ultimately, in order to be responsive to the previous stakeholder feedback we have received, we proposed to remove these seven eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination and subsequent years, even if as a result some hospitals may have to perform measure maintenance on measures that would be removed the following year. We believe our proposal to remove these eCQMs would spare hospitals that have already allocated and expended resources in 2018 in preparation for the CY 2019 reporting period that begins January 1, 2019 from the burden of unnecessarily expended resources or expending additional time and resources to update their EHR systems or adjust the eCQMs they selected to report for the CY 2019 reporting period/FY 2021 payment determination.

In the proposed rule, we noted that we are striving to establish program requirements that reflect the wide range of capabilities and resources of hospitals for eCQM reporting. Our proposal would allow more advanced notice of eCQMs that would and would not be available to report for the CY 2020 reporting period/FY 2022 payment determination. Therefore, we proposed to remove the AMI-8a, CAC-3, ED-1, EHDI-1a, PC-01, STK-08, and STK-10 eCQMs from the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination and subsequent years. We refer readers to section VIII.A.5.b.(9) of the preamble of the proposed rule for our proposals to remove these seven eCQMs from the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs). We also refer readers to sections VIII.A.11.d. of the preamble of this final rule for our proposals on the eCQM reporting requirements for the CY 2019 reporting

period/FY 2021 payment determination, including further discussion on the 2015 Edition of CEHRT.

We invited public comment on our proposal as discussed above, including the specific measures proposed for removal and the timing of removal from the program.

Comment: Many commenters supported CMS' proposals to remove seven eCQMs from the Hospital IQR Program because removal: (1) aligns with the Meaningful Measures framework to reduce reporting burden by examining measures through a lens that identifies meaningful, outcome-based measures; (2) creates a streamlined measure set and makes it easier for vendors to maintain specifications for the available eCQMs; (3) satisfies the aims of removal Factor 8, in that the expense of implementing and maintaining these measures outweighs the benefit to the healthcare team and Medicare beneficiaries; and (4) gives hospitals more time and resources to accommodate new reporting requirements by enabling them to focus on a more specific subset of eCQMs, while still allowing flexibility in measure selection to best reflect patient populations and support internal quality improvement efforts. Specifically, one commenter supported reducing the number of reportable eCQMs, and instead consolidating some of these additional quality measures into cost metrics such as the Medicare Spending Per Beneficiary (MSPB). Another commenter supported removing these seven eCQMs and further recommended CMS remove all existing eCQMs as they believe they do not fully support the Meaningful Measures framework and moving towards value-based care.

Response: We thank commenters for their support. We appreciate commenters' suggestions to remove additional eCQMs and to consolidate or replace them with more meaningful, outcomes-based measures. It is one of our goals to expand EHR-based quality reporting in the Hospital IQR Program using more meaningful measures, which we believe will ultimately reduce burden on hospitals as compared with chart-abstracted data reporting and improve patient outcomes by providing more robust data to support quality improvement efforts. We intend to introduce additional eCQMs into the program as eCQMs that support our program goals become available and would propose any such measures through future rulemaking.

Comment: A few commenters specifically supported CMS' proposal to remove the AMI-8a eCQM because with a limited number of hospitals reporting this measure, there is a lack of significant data for analysis of patient care and the costs outweigh the benefits. One commenter supported removal of the AMI-8a eCQM, but disagreed with the rationale for removal asserted under proposed removal Factor 8.

Response: We thank commenters for their support and we believe removal Factor 8 provides the appropriate rationale for removal of the AMI-8a eCQM because, as some commenters observed, the lack of data reported on the measure precludes meaningful data analysis, and therefore the costs outweigh the benefits of retaining the measure.

Comment: A few commenters specifically supported CMS' proposal to remove the CAC-3 eCQM because it is a "checkbox" measure that is based on documentation without evaluation of clinical quality. One commenter supported removal of the CAC-3

eCQM, but disagreed with the rationale for removal asserted under proposed removal Factor 8.

Response: We thank commenters for their support and we believe removal Factor 8 provides the appropriate rationale for removal of the CAC-3 eCQM because, as some commenters observed, it is based on documentation without evaluation of clinical quality, and therefore the costs outweigh the benefits of retaining the measure.

Comment: A few commenters specifically supported CMS' proposals to remove the STK-08 and STK-10 eCQMs because they are "checkbox" measures that are based on documentation without evaluation of clinical quality. One commenter supported removal of the STK-08 and STK-10 eCQMs, but disagreed with the rationale for removal asserted under proposed removal Factor 8. Another commenter noted that The Joint Commission removed the STK-08 and STK-10 eCQMs for the 2017 reporting year, acknowledging that their value was limited.

Response: We thank commenters for their support and we believe removal Factor 8 provides the appropriate rationale for removing the STK-08 and STK-10 eCQMs because, as some commenters observed, they are based on documentation without evaluation of clinical quality, and therefore the costs outweigh the benefits of retaining the measures.

Comment: A few commenters specifically supported CMS' proposals to remove the ED-1 measures (both eCQM and chart-abstracted versions) and ED-2 (chart-abstracted version), as well as removal of the ED-2 eCQM (which was not proposed for removal) due to cost. One commenter explained that their system cannot pull the

required times from the required locations (found in algorithm) so it is very difficult to get the true length of wait times. Despite efforts to change the system and educate the staff, the commenter believed these measures fail to improve quality of care because until patients stop misusing the ED and jamming up the system, the measure will not effectuate change. For these reasons, the commenter suggested that although the ED-2 eCQM was not proposed for removal, the ED-2 eCQM should also be removed.

Response: We thank the commenters for their support of these removals. We appreciate the commenter's feedback regarding the difficulty that may be experienced in identifying true length of ED wait times. We will take into consideration the feedback on the ED eCQMs as part of measure maintenance on the ED-2 eCQM. We believe ED-2 is clinically significant because it provides actionable information for quality improvement purposes such that it is important to retain the eCQM version in the measure set; however, we will also take into consideration the recommendation to remove the ED-2 eCQM from the Hospital IQR Program into consideration for future program years.

Comment: One commenter encouraged CMS to exclude CAHs with low ED volume from reporting both chart-abstracted and eCQM versions of the ED-2 measure.

Response: We appreciate the commenter's feedback, but note that under section 1886(b)(3)(B)(viii) of the Act, only subsection (d) hospitals are required to submit data to the Hospital IQR Program, not CAHs. However, we acknowledge that facilitating quality improvement for rural hospitals and small hospitals, such as CAHs, can present unique challenges and is a high priority under the Meaningful Measures Initiative.

Comment: A few commenters specifically supported CMS' proposal to remove the EHDI-1a eCQM because there is little benefit to measuring a widely practiced standard of care. One commenter supported CMS' proposal to remove the EHDI-1a eCQM, but disagreed with the rationale for removal asserted under proposed removal Factor 8.

Response: We thank commenters for their support and we believe removal Factor 8 provides the appropriate rationale for removal of the EHDI-1a eCQM because, as some commenters observed, it is of little benefit to measure a widely practiced standard of care, and therefore the costs outweigh the benefits of retaining the measure.

Comment: A few commenters specifically supported CMS' proposal to remove the PC-01 eCQM because the chart-abstracted version of the measure would be retained. Another commenter specifically supported CMS' proposal to remove PC-01, but requested that removal be aligned with removal of the chart-abstracted version of the measure from the Hospital VBP Program in the same performance year. The commenter asserted the belief that if a measure is topped out or removed in one format, it is most likely topped out in the other format as well.

Response: We thank commenters for their support. We appreciate the suggestion that removal of the PC-01 eCQM from the Hospital IQR Program be aligned with the removal of the chart-abstracted version of the PC-01 measure from the Hospital VBP Program; however, we believe that removing the PC-01 eCQM from the Hospital IQR Program beginning with the CY 2020 reporting period/FY 2022 payment determination and removing the chart-abstracted version of the PC-01 measure from the Hospital VBP

Program beginning with the CY 2019 reporting period/FY 2021 payment determination as proposed is the appropriate timeline for removal of each measure from their respective programs. As stated above, we are removing eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination as a result of stakeholder feedback requesting more notice before making changes to the eCQM measure set in order to give hospitals additional time to select alternate eCQMs, and to modify workflows and systems as necessary, in the case that eCQMs they had previously been reporting are being removed.

We refer readers to section IV.I.2.c.(1) of the preamble of this final rule for a discussion of the reasons we are removing the chart-abstracted version of the PC-01 measure from the Hospital VBP Program as soon as practicable, beginning with the CY 2019 performance period for the FY 2021 program year. We note that the chart-abstracted version of the PC-01 measure will continue to be included in the Hospital IQR Program and therefore, removing the chart-abstracted version of the PC-01 measure from the Hospital VBP Program will have no effect on hospital data collection burden whether it occurs beginning with the CY 2019 performance period or the CY 2020 performance period.

Comment: One commenter was neutral on the proposed removal of the eCQMs, but indicated that it would implement any replacement measures if necessary.

Response: We appreciate the commenter's support.

Comment: One commenter urged CMS to maintain a reasonable proportion of eCQMs applicable in primary care, retain eCQMs that are essential to Federally Qualified

Health Center patient populations, and continue to implement measures that are relevant to medically underserved populations.

Response: We acknowledge that facilitating quality improvement for medically underserved patient populations, such as those served by Federally Qualified Health Centers, presents unique challenges and eliminating disparities is a one of the strategic goals under the Meaningful Measures Initiative. For more information about Federal Qualified Health Centers, we refer readers to: <https://www.hrsa.gov/opa/eligibility-and-registration/health-centers/fqhc/index.html>. As stated above, it is also one of our goals to reduce reporting burden by expanding EHR-based quality reporting in the Hospital IQR Program using more meaningful measures, which we believe will ultimately reduce burden on hospitals as compared with chart-abstracted data reporting and improve patient outcomes by providing more robust data to support quality improvement efforts. We intend to introduce additional eQMs that support our program goals as they become available.

Comment: One commenter expressed concern that reducing the number of required measures may not result in reduced administrative burden for clinicians and staff and urged CMS to reduce the operational burden each specific measure places on clinicians and their medical practice staff by continuing to evaluate associated documentation requirements for measures to effectively reduce the administrative burden facing clinicians.

Response: We believe in enabling hospitals to focus on a smaller, more specific subset of eQMs, while still allowing hospitals some flexibility to select which eQMs

to report that best reflect their patient populations and support internal quality improvement efforts. In order to move the program forward in the least burdensome manner possible while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, we believe it is appropriate to remove additional eCQMs at this time to develop an even more streamlined set of the most meaningful eCQMs for hospitals. Creating a streamlined measure set reduces burden by making it easier for vendors to maintain specifications for the available eCQMs and giving hospitals more time and resources to accommodate new reporting requirements, while still allowing flexibility in measures selection to best reflect patient populations and support internal quality improvement efforts. In addition, we will continue to evaluate measure specifications and associated documentation requirements for the eCQMs we are retaining and for potential future eCQMs to ensure that we are moving the Program forward in the least burdensome manner possible while continuing to encourage improvement in the quality of care provided to patients.

Comment: Several commenters did not support removal of the seven eCQMs because of the burden on hospitals associated with selecting different measures to report if they had previously reported on the measures proposed for removal. The remaining measures are being collected, but additional work is needed to streamline data collection and discrete data analysis. One commenter explained that it has a few of the measures proposed for removal built in their system. The commenter expressed concern the measure removals would occur before hospitals have had significant time to really learn

how to effectively build, review, and evaluate the eCQMs. A few commenters expressed concern that hospitals would need to fully redevelop measures, pulling scarce resources from ongoing quality improvement efforts and recommended that CMS keep the current set of eCQMs, make the program data public, and allow the industry to learn how to best use the current set of measures before further modifications are made.

Response: We understand the commenters' concern with removing eCQMs that have been previously reported and implemented in an existing EHR workflow, and we acknowledge the time, effort, and resources that hospitals expend on reporting these measures. However, we believe that removal of these seven eCQMs will be less burdensome to hospitals overall than continuing to keep them in the Hospital IQR Program. As part of agency-wide efforts under the Meaningful Measures Initiative to use a parsimonious set of the most meaningful measures for patients and clinicians in our quality programs and the Patients Over Paperwork initiative to reduce burden, cost, and program complexity as discussed in section I.A.2. of the preamble of this final rule, our decision to remove measures from the Hospital IQR Program is an extension of our programmatic goal to continually refine the measure set.

We will continue working to provide hospitals with the education, tools, and resources necessary to help reduce eCQM reporting burden and more seamlessly account for the removal/addition of eCQMs. Further, we will consider the issues associated with new software, workflow changes, training, et cetera as we continue to improve our education and outreach efforts for eCQM submission and validation. We note that, as stated in the proposed rule, these eCQMs would not be removed until the CY 2020

reporting period/FY 2022 payment determination as a result of stakeholder feedback requesting more notice before making changes to the eCQM measure set in order to give hospitals additional time to select alternate eCQMs, and to modify workflows and systems as necessary, in the case that eCQMs they had previously been reporting are being removed. We will try to be as proactive as possible in providing lead time about the removal of measures from the Hospital IQR Program measure set.

Comment: One commenter did not support CMS' proposals to remove the seven eCQMs because there may be cases where individual eCQMs have value, even if topped out, or that there may be a risk of "back sliding" due to a shift in resources from topped-out measures to a new eCQM(s). Another commenter added that some evidence suggests removing certain technological and practice interventions leads to a reduction in desired clinical behavior. The commenter recommended that CMS monitor and evaluate how behaviors may change when eCQMs are removed through the process CMS finalized in its FY 2015 IPPS/LTCH PPS final rule.

Response: We respectfully disagree with the commenter that the removal of "topped-out" measures will necessarily result in hospitals no longer focusing on maintaining a high level of performance. We have confidence that hospitals are committed to providing good quality care to patients and we do not have any indication that they will stop doing so in these areas for which the quality of care measured has become standard practice. We also note that the eCQMs we are finalizing for removal are either duplicative of other measures in the program, or are of little benefit in assessing a widely practiced standard of care, or are based on documentation without evaluation of

clinical quality, and therefore the costs outweigh the benefits of retaining these measures. We encourage commenters to submit to CMS any evidence suggesting that removing certain technological and practice interventions leads to a reduction in desired clinical behavior.

Comment: Some commenters did not support CMS' proposals to remove the seven eQMs because they believed the remaining eQMs do not represent populations for small community hospitals. A few commenters observed that many small and rural hospitals triage and transfer stroke patients (four of the remaining eQMs), less than half have labor and delivery units (two of the remaining eQMs), and few have ICUs (one of the remaining eQMs). A few commenters expressed their belief that for most CAHs, only two of the remaining eQMs are relevant (ED-2 and VTE-1). Commenters reiterated the need for CMS to develop measures that are relevant for rural hospitals, because removing measures for which hospitals have a reasonable initial population results in a lack of options for hospitals with respect to eQm reporting. Although hospitals that do not have a sufficient number of patients may submit a zero denominator exemption, commenters noted there is no value to quality or improvement efforts if hospitals are exempted. Commenters believe hospitals need flexibility to choose the measures that are most representative of their patient populations.

In addition, a few commenters noted that reducing the number of available eQMs may present a challenge for hospitals to select measures that are well developed in data collection, workflow, and add value to the patient population of the organization. Commenters urged CMS to continue to work with stakeholders to develop measures that

focus on quality and safety, and to ensure that eCQMs truly provide comparable data across institutions to better assist our hospitals in understanding the methodology and ways to improve patient care.

Response: We acknowledge that facilitating quality improvement for rural hospitals, small hospitals, and CAHs<sup>294</sup> can present unique challenges and is a high priority under the Meaningful Measures Initiative. We understand the commenters' concern that the ability to submit a zero denominator exemption does not provide direct information for supporting quality improvement efforts and that hospitals need flexibility to choose the measures that are most representative of their patient populations. It is one of our goals to expand EHR-based quality reporting in the Hospital IQR Program using more meaningful measures, which we believe will ultimately reduce burden on hospitals as compared with chart-abstracted data reporting and improve patient outcomes by providing more robust data to support quality improvement efforts. We intend to introduce additional eCQMs into the program as ones that support our program goals become available. We also intend to continue to work with stakeholders to develop measures that focus on quality and safety. For more information about quality measurement efforts for rural health settings, we refer readers to the MAP Rural Health Workgroup at: [http://www.qualityforum.org/MAP\\_Rural\\_Health\\_Workgroup.aspx](http://www.qualityforum.org/MAP_Rural_Health_Workgroup.aspx)

Comment: One commenter recommended that before a significant number of measures are eliminated or there is an increase of measures that are required to be

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<sup>294</sup> We note that under section 1886(b)(3)(B)(viii) of the Act, only subsection (d) hospitals are required to submit data to the Hospital IQR Program. CAHs participate in the electronic reporting of CQMs under the Promoting Interoperability Programs.

reported to CMS, CMS provide an offering of measures that allows organizations to be able to select the measures that are aligned with the care given without increasing implementation and adoption burden. The commenter stated that one option would be to have a listing of all chart-abstracted measures, claims-based measures, hybrid measures, and eQMs available for the organization to select from and all reporting agencies would accept a combination of any of these measures (without regard to collection method) for providers to achieve minimum quality compliance.

Alternatively, similar to the Promoting Interoperability Program's Objectives and Measures, the commenter suggested that CMS could implement a 'point system' in which reporting of each quality measure is granted 3 points for chart-abstracted or claims-based measures, 4 points for hybrid measures, and 5 points for eQMs. Bonus points could be given (up to 5 points) for voluntary measures that are being considered for inclusion. With a selection choice of 20 total measures, a minimum of 30 points could be required to meet the quality reporting requirement. This could satisfy all reporting programs, including but not limited to, CMS' Promoting Interoperability, Hospital IQR, and Hospital VBP Programs, etc., as well as The Joint Commission. Overall, the idea would be to have the ability to choose measures that are best suited for each organization's quality needs, reduce the requirements for complex chart-abstracted and electronic measures across various programs if eQMs are easily available, and allow measures to satisfy multiple programs with single data submissions.

Response: We appreciate the commenter's suggestions and will take them into consideration as we continually refine the measure sets for our quality programs, as well as to improve alignment of requirements across our programs whenever possible.

Comment: One commenter specifically did not support CMS' proposal to remove the CAC-3 eCQM because it believed that plan-of-care documents are critical for the continuity of care and outcomes once a patient is discharged from the hospital. The commenter requested additional clarification about how removing the plan of care document reduces costs associated with the policy of Meaningful Measures without affecting patient outcomes.

Response: We agree that continuity of care and outcomes once a patient is discharged are important priorities; however, we disagree that the CAC-3 eCQM accomplishes these priorities. The CAC-3 eCQM assesses the proportion of pediatric asthma patients discharged from an inpatient hospital stay with a Home Management Plan of Care document given to the pediatric asthma patient/caregiver (83 FR 20482). We have previously issued guidance that measure developers should avoid selecting or constructing measures that can be met primarily through documentation without evaluating the clinical quality of the activity – often satisfied with a checkbox, date, or code – for example, the delivery-of-the-care-plan document for the CAC-3 measure.<sup>295</sup> In our effort to create a more parsimonious measure set, we assessed which measures were least costly to report and most effective in particular priority areas. We

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<sup>295</sup> CMS Measures Management System Blueprint (Blueprint v 13.0). CMS. 2017. Available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Downloads/Blueprint-130.pdf>.

believe that the CAC-3 eCQM is among the measures that provide less benefit to providers and beneficiaries, relative to the costs of implementing, maintaining, and reporting on this measure.

Comment: A few commenters did not support CMS' proposal to remove the ED-1 eCQM because they believed the measure has significant value and organizations have spent the time and effort to map and use this eCQM.

Response: We appreciate the commenters' position; however, we believe that it is appropriate to remove the ED-1 eCQM because the ED-2 eCQM is more effective at driving quality improvements. Removing the ED-1 eCQM is in keeping with our goal of moving the Hospital IQR Program forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients. We refer readers to section I.A.2. of the preamble of this final rule for a detailed description of those goals.

Comment: A few commenters requested that CMS provide at least 2 years notice prior to proposing to remove an eCQM due to the time and effort it takes to map an eCQM.

Response: We specifically crafted our proposed removal of the eCQMs to reflect stakeholder feedback to have more time to prepare for changes to eCQM reporting requirements, including changes to the eCQM measure set. We believe removal of the seven eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination, with a data submission deadline of February 28, 2021, provides sufficient

notice of eCQMs that will and will not be available for future reporting and allows hospitals enough time to implement changes associated with mapping new eCQMs. We will take the commenters' feedback about the timing of eCQM changes into consideration for future program years.

Comment: A few commenters believed it is difficult to interpret boarding time (ED-2) without measuring total length of stay for admitted patients (ED-1); the time stamp of "admit decision time" varies by hospital, and therefore comparing ED-2 between hospitals has little meaning without measuring ED-1. The commenters cautioned there may be potential for gaming by hospitals if just the ED-2 measure is used because hospitals hoping to reduce their ED-2 time might pressure emergency physicians to not indicate a decision to admit until an inpatient bed is available. If the ED-1 measure is retained, CMS may be able to monitor this practice by assessing how ED-1 increases relative to ED-2. Therefore, the commenters believed that both measures are necessary to ensure that patients receive high-quality care and that ED boarding times are appropriate. Finally, the commenters believed that keeping both measures in the program should not add any burden since hospitals do not have to invest additional financial resources reporting ED-1 and both measures are useful for research purposes.

Response: We understand that hospitals may need to collect the total length of stay for admitted patients to interpret boarding time, but we believe that in order to maintain a parsimonious set of the most meaningful measures, it is appropriate at this time to remove the ED-1 eCQM. We note the commenter's concern about potential for

gaming the ED-2 eCQM and we encourage stakeholders to share these concerns and any evidence of such instances with us.

We respectfully disagree that removing the ED-1 eCQM would not reduce some burden on providers and their health IT vendors. Focusing on a more streamlined measure set gives hospitals and their health IT vendors more time and resources to accommodate new reporting requirements by reducing measure maintenance and specification requirements. As we have stated above, the ED-2 eCQM captures more actionable information and hospitals have greater control over allocating resources and aligning inter-departmental communication to consistently reduce the time between the decision to admit and the time of admission. In addition, the Hospital OQR Program includes an ED throughput measure which publicly reports similar data as is captured by ED-1.

Comment: One commenter supported retaining the ED-1 eCQM but suggested refining it by adding the Emergency Severity Index to the measure to allow a better review of the length of time the patient is in the ED and to incorporate the acuity of the patient into the measure result.

Response: We thank the commenter for their suggestion to add the Emergency Severity Index, a five-level triage algorithm,<sup>296</sup> to refine the ED-1 eCQM, and will take it into consideration as we continually refine the measure sets for our quality programs.

Comment: One commenter did not support removal of the ED-1 eCQM because it is one of few eCQMs available for CAHs to meaningfully report on.

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<sup>296</sup> For more information on the Emergency Severity Index, we refer readers to: <https://www.ahrq.gov/professionals/systems/hospital/esi/index.html>.

Response: We acknowledge the commenter's concern about the sufficient availability of eCQMs, like the ED-1 eCQM, for reporting by CAHs. We note that under section 1886(b)(3)(B)(vii) of the Act, only subsection (d) hospitals are required to submit data to the Hospital IQR Program. CAHs are neither required to submit eCQM measure data to the Hospital IQR Program, nor subject to any payment reduction. However, CAHs participating in the Promoting Interoperability Programs have eCQM reporting requirements with respect to those programs using the same eCQM measure set, and we acknowledge that facilitating quality improvement for rural hospitals, small hospitals, and CAHs can present unique challenges and is a high priority under the Meaningful Measures Initiative. We are exploring opportunities to develop more relevant measures and less burdensome methods to collect quality measure data for use by small and rural hospitals. For more information about quality measurement efforts for rural health settings, we refer readers to the MAP Rural Health Workgroup at:

[http://www.qualityforum.org/MAP\\_Rural\\_Health\\_Workgroup.aspx](http://www.qualityforum.org/MAP_Rural_Health_Workgroup.aspx)

Comment: One commenter did not support CMS' proposal to remove the EHDI-1a and PC-01 eCQMs because the commenter represents a small community hospital that has already expended resources to implement these measures and because they are one of the few available eCQMs for which the hospital has a sufficient number of patients in the initial patient population to allow them to evaluate and maintain quality care and documentation.

Response: As noted above, we acknowledge that facilitating quality improvement for rural hospitals, small hospitals, and CAHs presents unique challenges and is a high

priority under the Meaningful Measures Initiative. We further appreciate the commenter's frustration that they have expended resources to implement measures that are being removed. It is one of our goals to expand EHR-based quality reporting in the Hospital IQR Program using more meaningful measures, which we believe will ultimately reduce burden on hospitals as compared with chart-abstracted data reporting and improve patient outcomes by providing more robust data to support quality improvement efforts. We intend to introduce additional eQMs into the program as eQMs that support our program goals become available.

Comment: A few commenters did not support CMS' proposal to remove the PC-01 eQm because they would prefer to report the eQm version of the measure rather than the chart-abstracted version. One commenter recommended that CMS begin requiring eQMs rather than chart-abstracted measures as they are seeing significant cost-reductions associated with not having to chart-abstract, and instead be allowed to submit eQMs. Another commenter observed that retaining the chart-abstracted version of this measure continues the burden of having to manually collect the data, in order to obtain the numerator and denominator to enter into the QualityNet Secure Portal and argued that retaining the PC-01 eQm while removing the PC-01 chart-abstracted measure would result in reduced burden as healthcare systems have already mapped the PC-01 eQm. A third commenter noted that data collection for the PC-01 eQm may reflect better performance on the measure as compared to the chart-abstracted version due to the discrete data requirement and all patient reporting for the eQm versus the sample

method of using any data (discrete and non-discrete) for reporting the chart-abstracted version.

One commenter did not support CMS' proposal to remove the PC-01 eCQM because the commenter believed it could be useful to retain both the eCQM and chart-abstracted versions of the measure to allow for comparison of the data. The commenter recommended CMS work to improve the PC-01 eCQM so that it can replace the chart-abstracted measure in the future. The PC-01 eCQM could collect all the cases in the population rather than sampling of cases as is done with the chart-abstracted measure. In addition, the electronic version of the measure would reduce the burden to the hospitals having to abstract, aggregate, and submit the measure data elements via the CMS web-based tool.

Response: We acknowledge commenters' feedback regarding a preference to use eCQMs rather than chart-abstracted measures in the Hospital IQR Program. We will take these suggestions into consideration for future program years. We are retaining the chart-abstracted version of the PC-01 measure rather than the PC-01 eCQM, because due to the importance of child and maternal health, we believe all hospitals with a sufficient number of cases should be required to report data on this measure. We reiterate our concern that if the eCQM version were retained and the chart-abstracted version removed, we believe that due to the low volume of patients relative to total adult hospital population and the ability of hospitals to select other eCQMs to report other than the PC-01 eCQM, we would not receive enough data to produce meaningful analyses.

Further, hospitals are only required to submit several aggregate counts for the chart-abstracted version of this measure,<sup>297</sup> instead of the potentially numerous patient-level charts, such that submission of this measure places less information collection burden on hospitals than other chart-abstracted measures. Hospitals are able to submit their aggregate counts using our Web-Based Measure Tool through the QualityNet website. In addition, PC-01 is one of only two measures of child and maternal health in the Hospital IQR Program measure set, and is the only publicly reported measure of child and maternal health in the Program. As to the commenter's belief that the PC-01 eCQM may reflect better measure performance as compared to the chart-abstracted version, we note that since eCQM data are not currently publicly reported, the chart-abstracted version of PC-01 is currently the only pathway for publicly reporting these data and is therefore important to retain. We believe it is important to continue to provide publicly reported information on this important topic, but that it would be costly and duplicative to retain both the chart-abstracted version and the eCQM. As discussed in section VIII.A.4.b. of the preamble of this final rule, one of our main goals is to move forward in the least burdensome manner possible, while maintaining a parsimonious set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients. We believe retaining the chart-abstracted version and removing the eCQM version best aligns with that goal. We appreciate commenter's recommendation to improve the PC-01 eCQM version to replace the chart-abstracted version and will take that into consideration for future program years.

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<sup>297</sup> FY 2013 IPPS/LTCH PPS final rule (77 FR 53528 through 53530).

Comment: Many commenters supported CMS' proposals to remove the seven eQMs beginning with the CY 2020 reporting period/FY 2022 payment determination as proposed, because they stated that hospitals need extensive time and resources to install software, map updates appropriately, and to successfully submit the data to CMS. In particular, commenters noted that the proposed eQm removal timeline would ensure hospitals currently preparing to report any of the removed measures in 2019 would not be forced to choose new measures with a reduced implementation timeline.

Response: We thank commenters for their support.

Comment: Many commenters supported the alternative considered, for CMS to remove the seven eQMs sooner beginning with the CY 2019 reporting period/FY 2021 payment determination because they believe earlier removal would alleviate burden from hospitals to report and for health IT vendors to update and certify measures that will not be available to report in the future. Commenters also suggested that measures for which CMS determines that the costs outweigh the benefits should be removed as soon as possible. Several commenters noted that EHR vendors must rewrite all measures in CQL for this reporting period, which would have very limited utility before being phased out. Commenters added that earlier removal would prevent additional work for health IT vendors and hospitals to update internal reporting to the new measure specifications and value sets anticipated in late calendar year 2018.

A few commenters recommended CMS allow hospitals to use the eQm Extraordinary Circumstances Exception to apply for an exception from the eQm reporting requirements for the CY 2019 reporting period/FY 2021 payment determination

if the hospital cannot use four of the remaining eight eCQMs. One commenter believed that the request to lengthen the time period between changes applies to the updating of specifications or introduction of new eCQMs, not to the complete removal as there is minimal work associated with removing an eCQM compared to updating or implementing an eCQM.

Response: We appreciate commenters' recommendation that we remove the eCQMs sooner than proposed. However, we continue to believe removing these eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination is the least burdensome choice for the largest number of hospitals participating in the Hospital IQR Program. We note that since hospitals will have the same requirement of reporting 4 eCQMs and one quarter of data as in previous years for the CY 2019 reporting period/FY 2021 payment determination, as finalized in section VIII.A.11.d.(2) of the preamble of this final rule, there will be no increase in reporting burden by removing the seven eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination, while preserving greater availability of eCQMs to choose from for an additional year, especially for small and rural hospitals and any other hospitals that may benefit from the additional year to plan time and resources for when the eCQMs are ultimately removed from the program. We have previously received feedback from hospitals indicating they would benefit from longer timelines for implementing changes to eCQM requirements because hospitals may need time to adjust workflows and work with health IT vendors to modify support for eCQM implementation, data collection, and reporting. This lead time is particularly important for hospitals that have already

developed the necessary IT and workflow plans to report data on the eQMs being removed from the Hospital IQR Program, as retaining the measures for an additional year will allow those hospitals to submit data as planned for the CY 2019 reporting period that begins January 1, 2019 and begin any necessary updates for subsequent years' reporting well ahead of time. Therefore, in consideration of the time, effort, and resources already expended to report these measures that we are finalizing for removal and the time and resources necessary to update hospital EHR systems to report on different measures in future program years, we believe retaining these eQMs measures in the Hospital IQR Program until the CY 2020 reporting period/FY 2022 payment determination is the most appropriate timeline for the greatest number of hospitals.

Under the Hospital IQR Program Extraordinary Circumstances Exceptions (ECE) Policy, hospitals may request an exception when they are unable to submit required data due to extraordinary circumstances not within their control. We note that ECE requests for the Hospital IQR Program are considered on a case-by-case basis (81 FR 57182). We will assess the hospital's request on a case-by-case basis to determine if an exception is merited. Therefore, our decision whether or not to grant an ECE will be based on the specific circumstances of the hospital. For additional information about eQm-related ECE requests, we refer readers to section VIII.A.16 of the preamble of this final rule.

After consideration of the public comments we received, we are finalizing our proposal to remove the AMI-8a, CAC-3, ED-1, EHDI-1a, PC-01, STK-08, and STK-10 eQMs from the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination and subsequent years as proposed. We refer readers to section

VIII.D.9 of the preamble of this final rule where we also remove these seven eCQMs from the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs).

c. Summary of Hospital IQR Program Measures Newly Finalized for Removal

In the proposed rule, we proposed to remove a total of 39 measures from the program, as summarized in the table in section VIII.A.5.c. of the preamble of the proposed rule (83 FR 20484 through 20485). We are finalizing the removal of those 39 measures as they are summarized in the table below:

<b>Summary of Hospital IQR Program Measures Newly Finalized for Removal</b>			
<b>Short Name</b>	<b>Measure Name</b>	<b>First Payment Determination Year for Removal</b>	<b>NQF #</b>
<b>Structural Patient Safety Measures</b>			
Safe Surgery Checklist	Safe Surgery Checklist Use	FY 2020	N/A
Patient Safety Culture	Hospital Survey on Patient Safety Culture	FY 2020	N/A
<b>Patient Safety Measures</b>			
PSI 90	Patient Safety and Adverse Events Composite	FY 2020	0531
CAUTI	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	FY 2022	0138
CDI	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure	FY 2022	1717
CLABSI	National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	FY 2022	0139

<b>Summary of Hospital IQR Program Measures Newly Finalized for Removal</b>			
<b>Short Name</b>	<b>Measure Name</b>	<b>First Payment Determination Year for Removal</b>	<b>NQF #</b>
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	FY 2022	0753
MRSA Bacteremia	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure	FY 2022	1716
<b>Claims-Based Coordination of Care Measures</b>			
READM-30-AMI	Hospital 30-Day All-Cause Risk-Standardized Readmission Rate Following Acute Myocardial Infarction (AMI) Hospitalization	FY 2020	0505
READM-30-CABG	Hospital 30-Day, All-Cause, Unplanned, Risk-Standardized Readmission Rate Following Coronary Artery Bypass Graft (CABG) Surgery	FY 2020	2515
READM-30-COPD	Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	FY 2020	1891
READM-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Heart Failure (HF) Hospitalization	FY 2020	0330
READM-30-PNA	Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Pneumonia Hospitalization	FY 2020	0506
READM-30-THA/TKA	Hospital-Level 30-Day, All-Cause Risk-Standardized Readmission Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee	FY 2020	1551

<b>Summary of Hospital IQR Program Measures Newly Finalized for Removal</b>			
<b>Short Name</b>	<b>Measure Name</b>	<b>First Payment Determination Year for Removal</b>	<b>NQF #</b>
	Arthroplasty (TKA)		
READM-30-STK	30-Day Risk Standardized Readmission Rate Following Stroke Hospitalization	FY 2020	N/A
<b>Claims-Based Mortality Measures</b>			
MORT-30-AMI	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization	FY 2020	0230
MORT-30-HF	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure (HF) Hospitalization	FY 2020	0229
MORT-30-COPD	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	FY 2021	1893
MORT-30-PN	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization	FY 2021	0468
MORT-30-CABG	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery	FY 2022	2558
<b>Claims-Based Patient Safety Measure</b>			
Hip/Knee Complications	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	FY 2023	1550
<b>Claims-Based Payment Measures</b>			
MSPB	Medicare Spending Per Beneficiary (MSPB) - Hospital Measure	FY 2020	2158
Cellulitis Payment	Cellulitis Clinical Episode-Based Payment Measure	FY 2020	N/A
GI Payment	Gastrointestinal Hemorrhage Clinical	FY 2020	N/A

<b>Summary of Hospital IQR Program Measures Newly Finalized for Removal</b>			
<b>Short Name</b>	<b>Measure Name</b>	<b>First Payment Determination Year for Removal</b>	<b>NQF #</b>
	Episode-Based Payment Measure		
Kidney/UTI Payment	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	FY 2020	N/A
AA Payment	Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure	FY 2020	N/A
Chole and CDE Payment	Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure	FY 2020	N/A
SFusion Payment	Spinal Fusion Clinical Episode-Based Payment Measure	FY 2020	N/A
<b>Chart-Abstracted Clinical Process of Care Measures</b>			
IMM-2	Influenza Immunization	FY 2021	1659
VTE-6	Incidence of Potentially Preventable VTE [Venous Thromboembolism]	FY 2021	+
ED-1	Median Time from ED Arrival to ED Departure for Admitted ED Patients	FY 2021	0495
ED-2*	Admit Decision Time to ED Departure Time for Admitted Patients	FY 2022	0497
<b>EHR-Based Clinical Process of Care Measures (that is, Electronic Clinical Quality Measures (eCQMs))</b>			
AMI-8a	Primary PCI Received Within 90 Minutes of Hospital Arrival	FY 2022	+
CAC-3	Home Management Plan of Care Document Given to Patient/Caregiver	FY 2022	+
ED-1	Median Time from ED Arrival to ED Departure for Admitted ED Patients	FY 2022	0495
EHDI-1a	Hearing Screening Prior to Hospital Discharge	FY 2022	1354
PC-01	Elective Delivery	FY 2022	0469
STK-08	Stroke Education	FY 2022	+
STK-10	Assessed for Rehabilitation	FY 2022	0441

\* Measure is finalized for removal in chart-abstracted form, but will be retained in eCQM form.  
 + NQF endorsement removed.

## 6. Summary of Hospital IQR Program Measures for the FY 2020 Payment

## Determination

The table below summarizes the Hospital IQR Program measure set for the FY 2020 payment determination (including previously adopted measures, but not including measures finalized for removal beginning with the FY 2020 payment determination in this final rule):

<b>Measures for the FY 2020 Payment Determination*</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
<b>Healthcare-Associated Infection Measures</b>		
CAUTI	National Healthcare Safety Network Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CDI	National Healthcare Safety Network Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure	1717
CLABSI	National Healthcare Safety Network Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal Hysterectomy SSI	American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	0753
HCP	Influenza Vaccination Coverage Among Healthcare Personnel	0431
MRSA Bacteremia	National Healthcare Safety Network Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure	1716
<b>Claims-Based Patient Safety Measures</b>		
Hip/Knee Complications	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550

<b>Measures for the FY 2020 Payment Determination*</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
PSI 04	Death Rate among Surgical Inpatients with Serious Treatable Complications <sup>298</sup>	0351
<b>Claims-Based Mortality Measures</b>		
MORT-30-CABG	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery	2558
MORT-30-COPD	Hospital 30-Day, All-Cause, Risk Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	1893
MORT-30-PN	Hospital 30-Day, All-Cause, Risk Standardized Mortality Rate Following Pneumonia Hospitalization	0468
MORT-30-STK	Hospital 30-Day, All-Cause, Risk Standardized Mortality Rate Following Acute Ischemic Stroke	N/A
<b>Claims-Based Coordination of Care Measures</b>		
READM-30-HWR	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	1789
AMI Excess Days	Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction	2881
HF Excess Days	Excess Days in Acute Care after Hospitalization for Heart Failure	2880
PN Excess Days	Excess Days in Acute Care after Hospitalization for Pneumonia	2882
<b>Claims-Based Payment Measures</b>		
AMI Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care for Acute Myocardial Infarction (AMI)	2431
HF Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care For Heart Failure (HF)	2436
PN Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-day Episode-of-Care For Pneumonia	2579
THA/TKA Payment	Hospital-Level, Risk-Standardized Payment	N/A

<sup>298</sup> We note that measure stewardship of the recalibrated version of the Death Rate among Surgical Inpatients with Serious Treatable Complications measure is transitioning from AHRQ to CMS and, as part of the transition, the measure will be referred to as the CMS Recalibrated Death Rate among Surgical Inpatients with Serious Treatable Complications (CMS PSI 04) when it is used in CMS quality programs.

<b>Measures for the FY 2020 Payment Determination*</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
	Associated with an Episode-of-Care for Primary Elective Total Hip Arthroplasty and/or Total Knee Arthroplasty	
<b>Chart-Abstracted Clinical Process of Care Measures</b>		
ED-1**	Median Time from ED Arrival to ED Departure for Admitted ED Patients	0495
ED-2**	Admit Decision Time to ED Departure Time for Admitted Patients	0497
IMM-2	Influenza Immunization	1659
PC-01**	Elective Delivery	0469
Sepsis	Severe Sepsis and Septic Shock: Management Bundle (Composite Measure)	0500
VTE-6	Incidence of Potentially Preventable Venous Thromboembolism	+
<b>EHR-Based Clinical Process of Care Measures (that is, Electronic Clinical Quality Measures (eCQMs))</b>		
AMI-8a	Primary PCI Received Within 90 Minutes of Hospital Arrival	+
CAC-3	Home Management Plan of Care Document Given to Patient/Caregiver	+
ED-1**	Median Time from ED Arrival to ED Departure for Admitted ED Patients	0495
ED-2**	Admit Decision Time to ED Departure Time for Admitted Patients	0497
EHDI-1a	Hearing Screening Prior to Hospital Discharge	1354
PC-01**	Elective Delivery	0469
PC-05	Exclusive Breast Milk Feeding	0480
STK-02	Discharged on Antithrombotic Therapy	0435
STK-03	Anticoagulation Therapy for Atrial Fibrillation/Flutter	0436
STK-05	Antithrombotic Therapy by the End of Hospital Day Two	0438
STK-06	Discharged on Statin Medication	0439
STK-08	Stroke Education	+
STK-10	Assessed for Rehabilitation	0441
VTE-1	Venous Thromboembolism Prophylaxis	0371
VTE-2	Intensive Care Unit Venous Thromboembolism Prophylaxis	0372

<b>Measures for the FY 2020 Payment Determination*</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
<b>Patient Experience of Care Survey Measures</b>		
HCAHPS***	Hospital Consumer Assessment of Healthcare Providers and Systems Survey (including Care Transition Measure)	0166 (0228)

\* As discussed in section VIII.A.5. of the preamble of this final rule, we are finalizing our proposals to remove 19 measures – 17 claims-based measures and two structural measures -- beginning with the FY 2020 payment determination. These measures, which had previously been finalized for the FY 2020 payment determination are not included in this summary table.

\*\* Measure listed twice, as both chart-abstracted and eCQM versions.

\*\*\* We have proposed to update the HCAHPS Survey by removing the Communication About Pain questions effective with January 2022 discharges, for the FY 2024 payment determination and subsequent years. We refer readers to the CY 2019 OPPS/ASC proposed rule (available at:

<https://www.regulations.gov/document?D=CMS-2018-0078-0001>).

+ NQF endorsement has been removed.

7. Summary of Hospital IQR Program Measures for the FY 2021 Payment

Determination

The table below summarizes the Hospital IQR Program measure set for the FY 2021 payment determination (including previously adopted measures, but not including measures finalized for removal beginning with the FY 2021 payment determination in this final rule):

<b>Measures for the FY 2021 Payment Determination</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
<b>Healthcare-Associated Infection Measures</b>		
CAUTI	National Healthcare Safety Network Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	0138
CDI	National Healthcare Safety Network Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure	1717
CLABSI	National Healthcare Safety Network Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure	0139
Colon and Abdominal	American College of Surgeons – Centers for	0753

<b>Measures for the FY 2021 Payment Determination</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
Hysterectomy SSI	Disease Control and Prevention Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	
MRSA Bacteremia	National Healthcare Safety Network Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure	1716
HCP	Influenza Vaccination Coverage Among Healthcare Personnel	0431
<b>Claims-Based Patient Safety Measures</b>		
Hip/Knee Complications	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
PSI 04	Death Rate among Surgical Inpatients with Serious Treatable Complications	+
<b>Claims-Based Mortality Measures</b>		
MORT-30-STK	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Ischemic Stroke*	N/A
<b>Claims-Based Coordination of Care Measures</b>		
READM-30-HWR	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	1789
AMI Excess Days	Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction	2881
HF Excess Days	Excess Days in Acute Care after Hospitalization for Heart Failure	2880
PN Excess Days	Excess Days in Acute Care after Hospitalization for Pneumonia	2882
<b>Claims-Based Payment Measures</b>		
AMI Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care for Acute Myocardial Infarction (AMI)	2431
HF Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care For Heart Failure (HF)	2436
PN Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-day Episode-of-Care For	2579

<b>Measures for the FY 2021 Payment Determination</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
	Pneumonia	
THA/TKA Payment	Hospital-Level, Risk-Standardized Payment Associated with an Episode-of-Care for Primary Elective Total Hip Arthroplasty and/or Total Knee Arthroplasty	N/A
<b>Chart-Abstracted Clinical Process of Care Measures</b>		
ED-2*	Admit Decision Time to ED Departure Time for Admitted Patients	0497
PC-01*	Elective Delivery	0469
Sepsis	Severe Sepsis and Septic Shock: Management Bundle (Composite Measure)	0500
<b>EHR-Based Clinical Process of Care Measures (that is, Electronic Clinical Quality Measures (eCQMs))</b>		
AMI-8a	Primary Percutaneous Coronary Intervention Received within 90 minutes of Hospital Arrival	+
CAC-3	Home Management and Plan of Care Document Given to Patient/Caregiver	+
ED-1	Median Time From ED Arrival to ED Departure for Admitted ED Patients (ED-1)	0495
ED-2*	Admit Decision Time to ED Departure Time for Admitted Patients (ED-2)	0497
EHDI-1a	Hearing Screening Prior to Hospital Discharge	1354
PC-01*	Elective Delivery	0469
PC-05	Exclusive Breast Milk Feeding	0480
STK-02	Discharged on Antithrombotic Therapy	0435
STK-03	Anticoagulation Therapy for Atrial Fibrillation/Flutter	0436
STK-05	Antithrombotic Therapy by the End of Hospital Day Two	0438
STK-06	Discharged on Statin Medication	0438
STK-08	Stroke Education	+
STK-10	Assessed for Rehabilitation	0441
VTE-1	Venous Thromboembolism Prophylaxis	0371
VTE-2	Intensive Care Unit Thromboembolism Prophylaxis	0372
<b>Patient Experience of Care Survey Measures</b>		
HCAHPS**	Hospital Consumer Assessment of Healthcare Providers and Systems Survey	0166 (0228)

<b>Measures for the FY 2021 Payment Determination</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
	(including Care Transition Measure)	

\* Measure listed twice, as both chart-abstracted and eCQM versions.

\*\* We have proposed to update the HCAHPS Survey by removing the Communication About Pain questions effective with January 2022 discharges, for the FY 2024 payment determination and subsequent years. We refer readers to the CY 2019 OPPI/ASC proposed rule (available at: <https://www.regulations.gov/document?D=CMS-2018-0078-0001>).

+ NQF endorsement has been removed.

8. Summary of Hospital IQR Program Measures for the FY 2022 Payment

Determination and Subsequent Years

The table below summarizes the Hospital IQR Program measure set for the FY 2022 payment determination (including previously adopted measures, but not including measures finalized for removal beginning with the FY 2022 payment determination in this final rule) and subsequent years:

<b>Measures for the FY 2022 Payment Determination and Subsequent Years</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
<b>Healthcare-Associated Infection Measures</b>		
HCP	Influenza Vaccination Coverage Among Healthcare Personnel	0431
<b>Claims-Based Patient Safety Measures</b>		
Hip/Knee Complications*	Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	1550
PSI 04	Death Rate among Surgical Inpatients with Serious Treatable Complications	0351
<b>Claims-Based Mortality Measures</b>		
MORT-30-STK	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Ischemic Stroke	N/A
<b>Claims-Based Coordination of Care Measures</b>		
READM-30-HWR	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	1789
AMI Excess Days	Excess Days in Acute Care after Hospitalization for	2881

<b>Measures for the FY 2022 Payment Determination and Subsequent Years</b>		
<b>Short Name</b>	<b>Measure Name</b>	<b>NQF #</b>
	Acute Myocardial Infarction	
HF Excess Days	Excess Days in Acute Care after Hospitalization for Heart Failure	2880
PN Excess Days	Excess Days in Acute Care after Hospitalization for Pneumonia	2882
<b>Claims-Based Payment Measures</b>		
AMI Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care for Acute Myocardial Infarction (AMI)	2431
HF Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care For Heart Failure (HF)	2436
PN Payment	Hospital-Level, Risk-Standardized Payment Associated with a 30-day Episode-of-Care For Pneumonia	2579
THA/TKA Payment	Hospital-Level, Risk-Standardized Payment Associated with an Episode-of-Care for Primary Elective Total Hip Arthroplasty and/or Total Knee Arthroplasty	N/A
<b>Chart-Abstracted Clinical Process of Care Measures</b>		
PC-01	Elective Delivery	0469
Sepsis	Severe Sepsis and Septic Shock: Management Bundle (Composite Measure)	0500
<b>EHR-based Clinical Process of Care Measures (that is, Electronic Clinical Quality Measures (eCQMs))</b>		
ED-2	Admit Decision Time to ED Departure Time for Admitted Patients	0497
PC-05	Exclusive Breast Milk Feeding	0480
STK-02	Discharged on Antithrombotic Therapy	0435
STK-03	Anticoagulation Therapy for Atrial Fibrillation/Flutter	0436
STK-05	Antithrombotic Therapy by the End of Hospital Day Two	0438
STK-06	Discharged on Statin Medication	0439
VTE-1	Venous Thromboembolism Prophylaxis	0371
VTE-2	Intensive Care Unit Venous Thromboembolism Prophylaxis	0372
<b>Patient Experience of Care Survey Measures</b>		
HCAHPS**	Hospital Consumer Assessment of Healthcare Providers and Systems Survey (including Care Transition Measure)	0166 (0228)

\* Finalized for removal from the Hospital IQR Program beginning with the FY 2023 payment determination, as discussed in section VIII.A.5.b.(5) of the preamble of this final rule.

\*\* We have proposed to update the HCAHPS Survey by removing the Communication About Pain questions effective with January 2022 discharges, for the FY 2024 payment determination and subsequent years. We refer readers to the CY 2019 OPPTS/ASC proposed rule (available at: <https://www.regulations.gov/document?D=CMS-2018-0078-0001>).

## 9. Possible New Quality Measures, Measure Topics, and Other Future Considerations

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53510 through 53512), we outlined considerations to guide us in selecting new quality measures to adopt into the Hospital IQR Program. We also refer readers to section I.A.2. of the preamble of this final rule where we describe the Meaningful Measures Initiative -- quality priorities that we have identified as high impact measurement areas that are relevant and meaningful to both patients and providers.

In keeping with these considerations, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20489 through 20495), we invited public comment on the potential future inclusion of a hospital-wide mortality measure in the Hospital IQR Program, specifically whether to propose to adopt a Claims-Only, Hospital-Wide, All-Cause, Risk-Standardized Mortality measure or a Hybrid Hospital-Wide, All-Cause, Risk-Standardized Mortality measure. We are also considering a newly specified eCQM for possible concurrent inclusion in future years of the Hospital IQR and Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs), the Opioid Harm Electronic Clinical Quality Measure (eCQM). We also sought public input on the future development and adoption of eCQMs more generally (for example, burdens, incentives). These topics are discussed in more detail below.

a. Potential Inclusion of Claims-Only Hospital-Wide Mortality Measure and/or Hybrid Hospital-Wide Mortality Measure with Electronic Health Record Data

(1) Background

Mortality is an important health outcome that is meaningful to patients and providers, and the vast majority of patients admitted to the hospital have survival as a primary goal. However, estimates using data from 2002 to 2008 suggest that more than 400,000 patients die each year from preventable harm in hospitals.<sup>299</sup> While we do not expect mortality rates to be zero, studies have shown that mortality within 30 days of hospital admission is related to quality of care, and that high and variable mortality rates across hospitals indicate opportunities for improvement.<sup>300,301</sup> In addition to the harm to individuals, their families, and caregivers resulting from preventable death, there are also significant financial costs to the healthcare system associated with high and variable mortality rates. While capturing monetary savings for preventable mortality events is challenging, using two recent estimates of the number of deaths due to preventable medical errors and assuming an average of ten lost years of life per death (valued at

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<sup>299</sup> James JT. A new, evidence-based estimate of patient harms associated with hospital care. *Journal of patient safety*. 2013;9(3):122-128.

<sup>300</sup> Peterson ED, Roe MT, Mulgund J, et al. Association between hospital process performance and outcomes among patients with acute coronary syndromes. *JAMA*. 2006;295(16):1912-1920.

<sup>301</sup> Writing Group for the Checklist- I.C.U. Investigators, Brazilian Research in Intensive Care Network. Effect of a quality improvement intervention with daily round checklists, goal setting, and clinician prompting on mortality of critically ill patients: A randomized clinical trial. *JAMA*. 2016;315(14):1480-1490.

\$75,000 per year in lost quality adjusted life years), the annual direct and indirect cost of potentially preventable deaths could be as much as \$73.5 to \$735 billion.<sup>302,303,304</sup>

Existing condition-specific mortality measures adopted into the Hospital IQR Program support quality improvement work targeted toward patients with a set of common medical conditions, such as heart failure, acute myocardial infarction, or pneumonia. The use of these measures may have contributed to national declines in hospital mortality rates for the measured conditions and/or procedures.<sup>305</sup> However, a measure of hospital-wide mortality captures a hospital's performance across a broader set of patients and across more areas of the hospital. Because more patients are included in the measure, a hospital-wide mortality measure also captures the performance for smaller volume hospitals that would otherwise not have sufficient cases to calculate condition- or procedure-specific mortality measures.

We developed two versions of a hospital-wide, all-cause, risk-standardized mortality measure: one that is calculated using only claims data (the Claims-Only Hospital-Wide All-Cause Risk Standardized Mortality Measure (hereinafter referred to as the "Claims-Only HWM measure")); and a hybrid version that uses claims data to define the measure cohort and a combination of data from electronic health records (EHRs) and

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<sup>302</sup> Institute of Medicine. *To Err is Human: Building a Safer Health System*. 1999; Available at: <https://iom.nationalacademies.org/~media/Files/Report%20Files/1999/To-Err-is-Human/To%20Err%20is%20Human%201999%20report%20brief.pdf>.

<sup>303</sup> Classen DC, Resar R, Griffin F, et al. 'Global trigger tool' shows that adverse events in hospitals may be ten times greater than previously measured. *Health Affairs*. 2011;30(4):581-589.

<sup>304</sup> Anel C, Davidow SL, Hollander M, Moreno DA. The economics of health care quality and medical errors. *Journal of health care finance*. 2012;39(1):39-50.

<sup>305</sup> Suter LG, Li SX, Grady JN, et al. National patterns of risk-standardized mortality and readmission after hospitalization for acute myocardial infarction, heart failure, and pneumonia: update on publicly reported outcomes measures based on the 2013 release. *Journal of general internal medicine*. 2014;29(10):1333-1340.

claims for risk adjustment (Hybrid Hospital-Wide All-Cause Risk Standardized Mortality Measure (hereinafter referred to as the “Hybrid HWM measure”)). The goal of developing hospital-wide mortality measures is to assess hospital performance on patient outcomes among patients for whom mortality is likely to present an important quality signal and those where the hospital can positively influence the outcome for the patient. Both versions of the measure address the Meaningful Measures Initiative quality priority of promoting effective treatment to reduce risk-adjusted mortality.

Several stakeholder groups were engaged throughout the development process, including a Technical Work Group and a Patient and Family Work Group, as well as a national, multi-stakeholder Technical Expert Panel (TEP) consisting of a diverse set of stakeholders, including providers and patients. These groups were convened by the measure developer under contract with us and provided feedback on the measure concept, outcome, cohort, risk model variables, and reporting results. The measure developer also solicited stakeholder feedback during measure development as required in the Measures Management System (MMS) Blueprint.<sup>306</sup>

We developed a Hybrid HWM measure in addition to a Claims-Only HWM measure in order to move toward greater use of EHR data for quality measurement, and in response to stakeholder feedback that is important to include clinical data in outcome measures (80 FR 49702 through 49703). The Hybrid HWM measure is harmonized with the Claims-Only HWM measure. Both measures use the same cohort definition, outcome

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<sup>306</sup> CMS Measures Management System Blueprint (Blueprint v 13.0). CMS. 2017. Available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Downloads/Blueprint-130.pdf>.

assessment, and claims-based risk variables (discussed in more detail below). The Hybrid HWM measure builds upon prior efforts to use of a set of core clinical data elements extracted from hospital EHRs for each hospitalized Medicare FFS beneficiary over the age of 65 years, as outlined in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49698). The core clinical data elements are data which are routinely collected on hospitalized adults, extraction from hospital EHRs is feasible, and the data can be utilized as part of specific quality outcome measures. The Hybrid HWM measure's core clinical data elements are very similar to, but not precisely that same as, those used in the Hybrid Hospital-Wide Readmission Measure with Claims and Electronic Health Record Data measure (NQF #2879), for which we are currently collecting data from hospitals on a voluntary basis and are considering proposing as a required measure as early as the FY 2023 payment determination (82 FR 38350 through 38355). For more detail about the core clinical data elements used in the Hybrid Hospital-Wide Readmission Measure with Claims and Electronic Health Record Data measure (NQF #2879), we refer readers to our discussion in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49698 through 49704) and the Hybrid Hospital-Wide Readmission Measure with Electronic Health Record Extracted Risk Factors report (available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Measure-Methodology.html>).

The Claims-Only Hospital-Wide All-Cause Risk Standardized Mortality Measure (MUC17-195) and the Hybrid Hospital-Wide All-Cause Risk Standardized Mortality Measure (MUC17-196) were included in a publicly available document entitled "2017

Measures Under Consideration List” (available at:

<http://www.qualityforum.org/ProjectMaterials.aspx?projectID=75367>) and have been reviewed by the NQF MAP Hospital Workgroup. The MAP conditionally supported both measures pending NQF review and endorsement, as referenced in the 2017-2018 Spreadsheet of Final Recommendations to HHS and CMS (available at:

<https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86972>).

The MAP also recommended the Hybrid HWM measure have a voluntary reporting period before mandatory implementation.<sup>307</sup>

The MAP noted both measures are important measures for patient safety, and that these measures could help reduce deaths due to medical errors.<sup>308</sup> We agree with MAP stakeholder concerns regarding the need for the NQF endorsement process to ensure the measures have appropriate clinical and social risk factors in the risk adjustment models and address necessary exclusions to ensure the measure does not disproportionately penalize facilities that may treat more complex patients.<sup>309</sup> The MAP also expressed concern regarding the potential unintended consequences of unnecessary interventions for patients at the end of life;<sup>310</sup> however, this issue was carefully addressed during measure development by excluding patients at the end of life and for whom survival is unlikely to be the goal of care from the measure cohort based upon the TEP and patient work group input. Specifically, the measure does not include patients enrolled in hospice

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<sup>307</sup> Measure Application Partnership. MAP 2018 Considerations for Implementing Measures in Federal Programs: Hospitals. Washington, DC: NQF; 2018. Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=87083>.

<sup>308</sup> Ibid.

<sup>309</sup> Ibid.

<sup>310</sup> Ibid.

in the 12 months prior to admission, on admission, or within 2 days of admission; the measure also does not include patients admitted primarily for cancer that are enrolled in hospice at any time during the admission, those admitted primarily for metastatic cancer, and those admitted for specific diagnoses with limited chances of survival.

The MAP further suggested that condition-specific mortality measures may be more actionable for providers and informative for consumers.<sup>311</sup> While service-line divisions may not be as granular as condition-specific measures, we believe a single comprehensive marker of hospital quality encourages organization-wide improvement, allows more hospitals to meet volume requirements for inclusion, offers more rapid detection of changes in performance due to performance being based on the most recent year of data available, and aligns with to the Meaningful Measures Initiative by creating the framework for stakeholders to have fewer measures to track and a single score to reference. We plan to submit both measures to NQF for endorsement proceedings as part of the Patient Safety Committee as early as FY 2019, after the measures have been fully specified for use with ICD-10 data.

## (2) Overview of Measures

Both the Claims-Only HWM measure and the Hybrid HWM measure capture hospital-level, risk-standardized mortality within 30 days of hospital admission for most conditions or procedures. The measures are reported as a single summary score, derived from the results of risk-adjustment models for 13 mutually exclusive service-line divisions (categories of admissions grouped based on discharge diagnoses or procedures),

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<sup>311</sup> Ibid.

with a separate risk model for each of the 13 service-line divisions. The 13 service-line divisions include: 8 non-surgical divisions and 5 surgical divisions. The non-surgical divisions are: cancer; cardiac; gastrointestinal; infectious disease; neurology; orthopedics; pulmonary; and renal. The surgical divisions are: cancer; cardiothoracic; general; neurosurgery; and orthopedics. Hospitalizations are eligible for inclusion in the measure if the patient was hospitalized at a non-Federal, short-stay acute care hospital. To compare mortality performance across hospitals, the measure accounts for differences in patient characteristics (patient case mix) as well as differences in the medical services provided and procedures performed by hospitals (hospital service mix). In addition, the Hybrid HWM Measure employs a combination of administrative claims data and clinical EHR data to enhance clinical case mix adjustment with additional clinical data.

Our goal is to more comprehensively measure the mortality rates of hospitals, including to improve the ability to measure mortality rates in smaller volume hospitals. The cohort definition attempts to capture as many admissions as possible for which survival would be a reasonable indicator of quality and for which adequate risk adjustment is possible. We assume survival would be a reasonable indicator of quality for admissions fulfilling two criteria: (1) survival is most likely the primary goal of the patient when they enter the hospital; and (2) the hospital can reasonably influence the patient's chance of survival through quality of care. These measures would provide information to hospitals that can facilitate quality improvement efforts for hospital settings, types of care, and types of patients not included in currently available condition- and procedure-specific mortality measures. Also, these measures would provide more

transparency about the quality of care in clinical areas not captured in the current condition- and procedure-specific measures.

Additional information on the development of both the Claims-Only and Hybrid versions of the HWM measure can be found on the CMS website at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

### (3) Data Sources

Both the Claims-Only and Hybrid versions of the HWM measure use Part A Medicare administrative claims data from Medicare FFS beneficiaries aged between 65 and 94 years, and use one year of data. Part A data from the 12 months prior to the index admission are used for risk adjustment.

The Hybrid HWM measure uses two sources of data for the calculation of the measure: Medicare Part A claims and a set of core clinical data elements from hospitals' EHRs. Claims and enrollment data are used to identify index admissions included in the measure cohort, in the risk-adjustment model, and to assess the 30-day mortality outcome. These data are merged with the core clinical data elements for eligible patient admissions from each hospital's EHR. The data elements are the values for a set of vital signs and common laboratory tests collected at presentation and used for risk-adjustment of patients' severity of illness (for Medicare FFS beneficiaries who are aged between 65 and 94 years), in addition to data from claims.

#### (4) Outcome

The outcome of interest for both the Claims-Only and Hybrid versions of the HWM measure is the same, all-cause 30-day mortality. We define all-cause mortality as death from any cause within 30 days of the index hospital admission date.

#### (5) Cohort

The cohorts for both the Claims-Only HWM and Hybrid versions of the HWM measure are the same. The measure cohorts consist of Medicare FFS beneficiaries, aged between 65 and 94 years, discharged from non-federal acute care hospitals.

The Claims-Only HWM measure and Hybrid HWM measure were developed using ICD-9 codes. The measures are currently being updated for use with ICD-10 codes; ICD-10 updates will be completed prior to NQF submission and potential future implementation. Similar to the existing Hospital-Wide All-Cause Unplanned Readmission measure (NQF #1789), which was adopted into the Hospital IQR Program in the FY 2013 IPPS/LTCH PPS final rule beginning with the FY 2015 payment determination (77 FR 53521 through 53528), the Claims-Only HWM measure and Hybrid HWM measure include a large and diverse number of admissions represented by thousands of included ICD-9 codes. During measure development, we used the AHRQ Clinical Classification Software (CCS)<sup>312</sup> to group diagnostic and procedural ICD-9 codes into the clinically meaningful categories defined by the AHRQ grouper. The transition of the ICD-9 CCS-based measure specifications to the ICD-10-CM version of the CCS is underway. The ICD-10 to CCS map and tools for its use are currently

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<sup>312</sup> Clinical Classifications Software (CCS) for ICD-9-CM Fact Sheet. Accessed at: <https://www.hcup-us.ahrq.gov/toolsoftware/ccs/ccsfactsheet.jsp>.

available at: <https://www.hcup-us.ahrq.gov/toolssoftware/ccs10/ccs10.jsp>. Both the Claims-Only and Hybrid versions of the HWM measure use those CCS categories as part of cohort specification and risk-adjustment, including the 13 service-line risk models.

For the AHRQ CCSs and individual ICD-9-CM codes that define the measure development cohort, we refer readers to the measure methodology reports on our website at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

#### (6) Inclusion and Exclusion Criteria

The inclusion and exclusion criteria for both the Claims-Only and Hybrid versions of the HWM measure are the same. For both versions of the HWM measure, the cohort currently includes Medicare FFS patients who: (1) were enrolled in Medicare FFS Part A for the 12 months prior to the date of admission and during the index admission; (2) have not been transferred from another inpatient facility; (3) were admitted for acute care (do not have a principal discharge diagnosis of a psychiatric disease or do not have a principal discharge diagnosis of “rehabilitation care; fitting of prostheses and adjustment devices”); (4) are aged between 65 and 94 years; (5) are not enrolled in hospice at the time of or in the 12 months prior to their index admission; (6) are not enrolled in hospice within two days of admission; (7) are without a principal diagnosis of cancer and enrolled in hospice during their index admission; (8) are without any diagnosis of metastatic cancer; and (9) are without a principal discharge diagnosis of a condition which hospitals have limited ability to influence survival, including: anoxic brain damage; persistent vegetative state; prion diseases such as Creutzfeldt-Jakob disease, Cheyne-Stokes

respiration; brain death; respiratory arrest; or cardiac arrest without a secondary diagnosis of acute myocardial infarction.

Both the Claims-Only and Hybrid versions of the HWM measure currently exclude the following index admissions for patients: (1) with inconsistent or unknown vital status; (2) discharged against medical advice; (3) with an admission for crush injury, burn, intracranial injury, or spinal cord injury; (4) with specific principal discharge diagnosis codes for which mortality may not be a quality signal; (5) with an admission in a CCS condition or procedure categorized as in the service-line divisions: Other Surgical Procedures or Other Non-Surgical Conditions (this exclusion is being reassessed to include these patients in the final measure); and (6) with an admission in a low-volume CCS (within a particular service-line division), defined as equal to or less than 100 patients with that principle diagnosis across all hospitals.

For both the Claims-Only and Hybrid versions of the HWM measure, each index admission is assigned to one of 13 mutually exclusive service-line divisions. For details on how each admission is assigned to a specific service-line division, and for a complete description and rationale of the inclusion and exclusion criteria, we refer readers to the methodology reports found on the CMS website at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

#### (7) Risk-Adjustment

Both the Claims-Only and Hybrid versions of the HWM measure adjust for both case mix differences (clinical status of the patient, accounted for by adjusting for age and

comorbidities) and service-mix differences (the types of conditions and procedures cared for and procedures conducted by the hospital, accounted for by the discharge condition category), and use the same patient comorbidities in the risk models. Patient comorbidities are based on inpatient hospital administrative claims during the 12 months prior to and including the index admission derived from ICD-9 codes grouped into the CMS condition categories (CMS-CCs). The measures are currently being updated for use with ICD-10 codes; ICD-10 updates will be completed prior to NQF submission and potential future adoption.

The Hybrid HWM measure also includes the core clinical data elements from patients' EHRs in the case mix adjustment. The core clinical data elements are derived from information captured in the EHR during the index admission only, and are listed below.

#### **Currently Specified Core Clinical Data Element Variables**

<b>Data Elements</b>	<b>Units of Measurement</b>	<b>Time Window for First Captured Values</b>
Heart Rate	Beats per minute	0-2 hours
Systolic Blood Pressure	mmHg	0-2 hours
Temperature	Degrees (Fahrenheit or Celsius)	0-2 hours
Oxygen Saturation	Percent	0-2 hours
Hemoglobin	g/dL	0-24 hours
Platelet	Count	0-24 hours
White Blood Cell Count	Cells/mL	0-24 hours
Sodium	mEq/L	0-24 hours
Bicarbonate	mmol/L	0-24 hours
Creatinine	mg/dL	0-24 hours

The core clinical data elements are clinical information meant to reflect a patient's clinical status upon arrival to the hospital. For more details on how the risk variables in each measure were chosen, we refer readers to the methodology reports found on the CMS website at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

(8) Calculating the Risk-Standardized Mortality Rate (RSMR)

The method for calculating the RSMR for both the Claims-Only and the Hybrid versions of the HWM measure is the same. Index admissions are assigned to one of 13 mutually exclusive service-line divisions consisting of related conditions or procedures. For each service-line division, the standardized mortality ratio (SMR) is calculated as the ratio of the number of “predicted” deaths to the number of “expected” deaths at a given hospital. For each hospital, the numerator of the ratio is the number of deaths within 30 days predicted based on the hospital's performance with its observed case mix and service mix, and the denominator is the number of deaths expected based on the nation's performance with that hospital's case mix and service mix. This approach is analogous to a ratio of “observed” to “expected” used in other types of statistical analyses.

The service-line SMRs are then pooled for each hospital using an inverse variance-weighted mean to create a hospital-wide composite SMR. The inverse variance-weighted mean can be interpreted as a weighted average of all SMRs that takes into account the precision of SMRs. The composite SMR is multiplied by the national observed mortality rate to produce the RSMR. For additional details regarding the

measure specifications to calculate the RSMR, we refer readers to the Claims-Only Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure: Measure Methodology for Public Comment report and Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure with Electronic Health Record Extracted Risk Factors: Measure Methodology for Public Comment report, which are posted on the CMS website at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

We invited public comment on the possible future inclusion of one or both hospital-wide mortality measures in the Hospital IQR Program simultaneously. We are also considering possible future inclusion of the Hybrid HWM measure in the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) for Clinical Quality Measures (CQM) electronic reporting by eligible hospitals and CAHs. We also invited public comment on other aspects of the measure. Specifically, we sought public comment on the following: (1) feedback about the service-line division structure of the measure; (2) input on the measure testing approach, particularly if there is any additional validity testing that would be meaningful; and (3) how the measure results might be presented to the public, including ways that we could present supplemental hospital performance information in public reporting, such as service-line division-level results, to create a more meaningful and usable measure and ways that we could report more information about hospitals in a No Different From National Average group (defined using 95 percent confidence

intervals) to help clinicians and patients use the measure results to improve patient care and make informed choices.

Comment: Several commenters supported future implementation of the hybrid version of the Hospital-Wide Mortality Measure over the claims-only version of the measure. Many commenters commended use of EHR data in the hybrid version of the measure.

Response: We thank commenters for their support of the hybrid version of the measure.

Comment: One commenter supported future implementation of the claims-only version of the measure, expressing concern that hybrid measures have not been sufficiently validated. Another commenter supported the claims-only version, citing the need for improvements to the process of submitting EHR data elements using the Quality Reporting Data Architecture (QRDA) I file format prior to implementation of hybrid measures.

Response: We thank commenters for their support of the claims-only version of the measure. However, in response to concerns that the hybrid measures have not been sufficiently validated, we note that several condition-specific hybrid measures (Hybrid Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Acute Ischemic Stroke with Risk Adjustment for Stroke Severity (NQF #2877) and Hybrid Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Acute Myocardial Infarction (AMI) (NQF #2473)), and the Hybrid Hospital-Wide Readmission Measure with Claims and Electronic Health Record Data (NQF #2879), have all been

tested and validated. Their validity and reliability have been reviewed by the NQF and the measures have been endorsed. The Hybrid Hospital-Wide Readmission Measure was implemented in the Hospital IQR Program as a voluntary measure for the CY 2018 reporting period. Hospitals that voluntarily participate will submit 13 EHR data elements for adult inpatients discharged between January and June of 2018. These data elements are nearly identical to those required for the Hybrid Hospital-Wide Mortality Measure. The results from the voluntary reporting will assist in confirming the feasibility of submitting the required data elements. In addition, we continue to work to improve the process of EHR data submission using the QRDA I file format, including the availability of the Pre-Submission Validation Application (PSVA) tool to perform test and production QRDA I file conformance checks.

Comment: Several commenters supported the proposed voluntary reporting of the Hybrid HWM measure following endorsement by the NQF.

Response: We thank commenters for their support. As stated in the proposed rule (83 FR 20490) and above, we plan to submit both versions of the measure to NQF for endorsement proceedings as part of the Patient Safety Committee as early as FY 2019, after the measures have been fully specified for use with ICD-10 data. We have not yet determined the implementation pathway or timeline for these measures. We will consider these suggestions if we move forward with proposing to include either or both of these measures in the Hospital IQR Program in the future through rulemaking.

Comment: Several commenters proposed revisions to the measure methodology, including merging surgical and non-surgical cancer service-line divisions and surgical and non-surgical orthopedic divisions.

Response: We thank commenters for their feedback. By design, the measure separates surgical and non-surgical admissions in order to account for differences in mortality risk between surgical and non-surgical patients. Analyses performed during measure development showed that even for patients with the same discharge condition, patient risk of death was strongly affected by whether a major surgical procedure was performed during hospitalization. Patients undergoing major surgical procedures typically have different risk of mortality than patients admitted with the same discharge condition but who do not undergo a major surgical procedure. For example, a patient admitted for a hip fracture (CCS 226) who undergoes a major surgical procedure such as hip replacement to treat their fracture is likely healthy enough to have the surgery, as compared to patients who are so ill that they either would not survive or choose not to risk undergoing surgery. In this example, surgery is associated with a lower observed mortality rate. The measure has more accurate risk adjustment, and thereby is better at accounting for the underlying risk of the population that the hospital serves, when the surgical and non-surgical patients are separated into distinct risk models.

To demonstrate this further, we note that in the case of surgical and non-surgical orthopedics, as well as surgical and non-surgical cancer, the hospital-level risk-standardized mortality rates (RSMR) are quite different. For example, for non-surgical cancer, the median RSMR in the development sample was 2.5 percent (range 1.3 percent

-6.0 percent) for surgical cancer, compared to 19.3 percent (range 9.3 percent - 33.7 percent) for non-surgical cancer. Furthermore, prior experience with other quality measures suggests that hospitals do not perform equally well across different service lines, thus it benefits hospitals and consumers to provide quality information on more narrow cohorts. Therefore, in order to make this measure useful in terms of quality improvement and patient choice, we designed the measure to report the surgical and non-surgical divisions separately.

Further, we note that some commenters observed that cancer care is complex and often includes surgical procedures, and advocated for both surgical and non-surgical cancer divisions to better capture cancer patients and allow providers, and possibly consumers, to view more detailed quality information related to cancer.

Comment: Multiple commenters expressed concern about the limitations of claims data including effectiveness in quality measurement. One commenter suggested that the measure should not include claims data and instead be specified entirely using EHR data. One commenter recommended that CMS use specialty specific registry data in the measure.

Response: We thank commenters for their feedback. Administrative claims data are routinely submitted by hospitals for quality measurement and are frequently audited by CMS. This allows for relatively accurate data about patients' acute and chronic conditions while also preventing undue burden on providers to submit additional clinical information. In addition, claims-based measures continue to provide important quality information that cannot currently be captured using EHR data alone. For example,

claims data can be linked across care settings to gather complete risk factors for patients. Claims data also enable tracking patient outcomes such as deaths that occur outside of a single care setting, and provide a reliable and valid source of information that supports the development of measures not currently feasible using EHR data alone. For these reasons, we believe that claims-based measures will continue to play a vital role in quality assessment. In addition, for claims-based outcome measures (procedure-specific mortality and readmission measures) we have previously developed, we have found measure scores calculated from data derived from medical records correlate highly with measure scores calculated with claims.<sup>313,314,315,316</sup> These studies support the use of claims for outcomes such as mortality.

At this time it is not feasible to develop and implement an eCQM measuring the outcome of mortality 30-days after admission to an acute care hospital. Deaths recorded as outcomes in CMS' claims-based mortality measures are derived from the Medicare Enrollment Database which provides information about deaths among Medicare beneficiaries.<sup>317</sup> Hospitals' EHRs do not include information about deaths that occur outside of the hospital and therefore cannot be used in place of Medicare enrollment data.

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<sup>313</sup> Krumholz HM, Wang Y, Mattera JA, et al. An administrative claims model suitable for profiling hospital performance based on 30-day mortality rates among patients with an acute myocardial infarction. *Circulation*. 2006 Apr 4;113(13):1683-701.

<sup>314</sup> Krumholz HM, Lin Z, Drye EE, et al. An administrative claims measure suitable for profiling hospital performance based on 30-day all-cause readmission rates among patients with acute myocardial infarction. *Circ Cardiovasc Qual Outcomes*. 2011 Mar 1;4(2):243-52.

<sup>315</sup> Keenan PS, Normand S-LT, Lin Z, et al. An administrative claims measure suitable for profiling hospital performance on the basis of 30-day all-cause readmission rates among patients with heart failure. *Circ Cardiovasc Qual Outcomes*. 2008 Sep;1(1):29-37.

<sup>316</sup> Bratzler DW, Normand S-LT, Wang Y, et al. An administrative claims model for profiling hospital 30-day mortality rates for pneumonia patients. *PLoS One*. 2011 Apr 12;6(4):e17401.

<sup>317</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), Centers for Medicare & Medicaid Services: Enrollment Database. Available at: <https://aspe.hhs.gov/centers-medicare-medicaid-services>

In addition, hospital claims provide a standardized and audited assessment of patients' principal discharge diagnoses, which are the basis for the service-line division assignment in the HWM measures. Therefore, claims and administrative data continue to provide critical information to support these quality measures.

Regarding the use of specialty registry data, we agree that registry data are a useful source of data to consider, in particular because registry data address care for all patients (not limited to Medicare fee-for-service patients). Registry data, however, are generally reported on a voluntary basis among registry participants only, and accordingly are not currently an available source of measurement data from all hospitals. However, we will continue to consider the potential use, feasibility, and availability of registry data for future measures.

Comment: Several commenters expressed concern about risk adjustment, including how the measure accounts for various mortality risks associated with different procedures performed at a hospital. In addition, commenters noted that the measure includes a broad range of conditions and procedures associated with widely varying mortality risk. Commenters expressed concern that these shortcomings could mask preventable hospital harms and lead to inaccurate performance comparisons. One commenter requested a better explanation of the risk adjustment utilized within each of the service line divisions.

Response: We thank commenters for their feedback. We agree that one of the key challenges in developing a hospital-wide mortality measure is to adequately account for the varying risk of mortality for the different populations of patients admitted to

hospitals and to adequately adjust for these differences when comparing performance across hospitals. However, we feel our risk adjustment approach appropriately accounts for these differences.

The measure addresses risk adjustment in several ways. First, since the risk of death differs between surgical and non-surgical patients, the measure separates patients who underwent major surgical procedures from those who did not. The measure then further divides the surgical and non-surgical groups into a total of 13 service-line divisions (Surgical divisions: General, Orthopedics, Cardiac, Cancer, and Neurosurgery; Non-surgical divisions: Cardiac, Infectious Disease, Pulmonary, Gastrointestinal, Renal, Orthopedic, Neurology, and Cancer). The surgical divisions are created by combining clinically related groups of procedures, considering the risk of death and the reason for admission (the principal discharge diagnosis) during the combination step. For the non-surgical division, the measure categorizes patients based on medical conditions that would typically be cared for by the same group of clinicians, as well as based on the risk of death.

To further account for differences in risk among patients, the measure adjusts for both patient-level factors (the medical condition of the patient when admitted to the hospital, accounted for by adjusting for illnesses and diagnoses the patient has when admitted) and hospital service mix differences (the types of conditions/procedures cared for by the hospital). Each of the 13 service-line divisions is risk-adjusted independently of the others, which helps account for differences in the mortality risks of procedures in the separate divisions. The hybrid version of the measure uses the same service-line

division risk models, patient case mix, and hospital service mix, but adds an additional 10 clinical risk variables extracted from the EHR. Although no measure is perfectly able to assess each harm or death, the detailed approach to risk adjustment of individual groups of procedures and conditions is intended to prevent inaccurate performance assessment by this measure.

The work described above was done with the careful and systematic input of clinicians. In addition, the steps described above were presented to the measure developer's Patient & Family Caregiver workgroup, technical and clinical workgroup, and the TEP, all of whom generally supported the approach. For more details about the risk-adjustment approach, we refer readers to the measure methodology report on the CMS website at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

Comment: Several commenters expressed concern that the measure does not adjust for social risk factors and that no analysis of their impact on the measures was provided. In addition, some commenters recommended additional research on the community-level factors described in the report by the Office of the Assistant Secretary for Planning and Evaluation (ASPE).<sup>318</sup>

Response: We thank commenters for their feedback. As part of our plans to submit this measure to the NQF for endorsement, we intend to provide the results of measure testing that includes assessing the impact of social risk factors on the measure

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<sup>318</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), "Report to Congress: Social Risk Factors and Performance Under Medicare's Value-Based Purchasing Programs." December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

results, as required for all measures seeking NQF endorsement. Specifically, NQF requires developers to present the results of analyses examining the impact of social risk factors on the measure outcome, as well as the degree to which any association is occurring at the patient-level or hospital-level.<sup>319</sup> We understand that the relevant NQF committees will examine the evidence and determine whether the measure is suitable for endorsement with or without adjustment for social risk factors, including consideration of potential community-level factors. This NQF analysis would be taken into consideration before we move forward with proposing either or both of these measures for inclusion in the Hospital IQR Program in future rulemaking.

Comment: One commenter recommended educating the public about where to obtain information about hospital performance on the measure in order to ensure that the measure is useful once results are made public.

Response: We thank the commenter for the suggestion. Should we decide to move forward with proposing either or both of these measures for inclusion in the Hospital IQR Program in future rulemaking, the results will be publicly reported on the *Hospital Compare* website.

Comment: One commenter requested clarification on how the term “average” is derived and the usage of the term by the measure developer.

Response: The term “average” is employed in three different circumstances. First, when identifying outlier hospitals, we use the unadjusted national average mortality

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<sup>319</sup> National Quality Forum (NQF). “A Roadmap for Promoting Health Equity and Eliminating Disparities: The Four I’s for Health Equity.” Available at: [https://www.qualityforum.org/Publications/2017/09/A\\_Roadmap\\_for\\_Promoting\\_Health\\_Equity\\_and\\_Eliminating\\_Disparities\\_\\_The\\_Four\\_I\\_s\\_for\\_Health\\_Equity.aspx](https://www.qualityforum.org/Publications/2017/09/A_Roadmap_for_Promoting_Health_Equity_and_Eliminating_Disparities__The_Four_I_s_for_Health_Equity.aspx).

rate, which is calculated as the total number of deaths divided by the total number of patients; hospitals' risk-standardized mortality rates are considered outliers if they are statistically significantly different from the unadjusted national average mortality rate. Secondly, in calculating the hospital risk-standardized mortality rate, we multiply the standardized mortality ratio (predicted mortality/expected mortality) by the same unadjusted national average mortality rate, which is calculated as the total number of deaths divided by the total number of patients. Lastly, to calculate the denominator of the standardized mortality ratio (expected mortality), we determine the number of deaths among that hospital's patients given the patients' risk factors and the average of all hospital-specific effects in the nation. Specifically, for each patient in the data-set, the estimated regression coefficients are multiplied by the observed characteristics and the average of the hospital-specific intercepts is added to this quantity. In the hierarchical logistic regression model, we modelled hospital specific intercept as deviation from the average which is set to 0, therefore some hospital specific intercepts will be above 0 while some hospital specific intercepts will be below 0. For more details, we refer readers to the measure methodology report on the CMS website at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

Comment: Multiple commenters submitted suggestions about how CMS should implement the hybrid version of the HWM measure, including: (1) conducting a pilot run of data submission prior to implementation; (2) testing the use of EHR data to

risk-adjust the current condition-specific mortality measures; (3) implementing a voluntary reporting period; and (4) publicly reporting service line data.

Response: We thank commenters for their suggestions. We will take all feedback under consideration as we determine future use of these measures in the Hospital IQR Program.

Comment: Some commenters expressed concern about potential unintended consequences of the measure, including incentivizing hospitals to withhold appropriate end-of-life care and penalizing hospitals for mortality that is not related to quality. Several commenters believed that the exclusions, as currently specified, could mask preventable hospital harms and could be improved. One commenter suggested a four-day hospice enrollment window instead of the 2-day window currently specified.

Response: We thank commenters for their feedback. We are committed to examining and avoiding unintended consequences in relation to patient perspectives, and we agree that mortality is not an appropriate assessment of quality for patients or families who have elected to enroll in hospice and are at the end of life.

During measure development, we sought to identify and exclude cases in which survival was not the primary goal and in which hospitals cannot influence survival through quality of care. This was achieved by excluding patients who had enrolled in hospice within the past 12 months of the index hospitalization, upon admission, or within two days after admission to the hospital. Most patients who have enrolled in hospice do not have the same goals of care as those who are not enrolled. In addition, based on feedback from stakeholders and experts consulted during measure development, it is

likely that for most patients and/or families who discussed and agreed to enroll in hospice within two days of admission, survival is not the primary goal due to a condition that was present on admission and therefore, mortality should not be used as a marker of quality care. Longer enrollment windows were considered in our discussions with experts, patients, and families. However, the TEP felt that the risk of excluding patients who enrolled in hospice care due to the outcome of poor quality of care provided by a hospital outweighed the potential benefit of extending the window for the exclusion of these patients. We recognize that there is no single, correct approach to identifying patients at the end-of-life and the use of hospice enrollment does not perfectly differentiate between patients who have a goal of survival from those who do not. Similarly, we cannot perfectly distinguish every preventable harm. However, we feel the current approach accurately identifies most patients we intend to assess through the HWM measure and errs on the side of protecting a patient's choice to defer aggressive treatment at the end of life.

Comment: Several commenters expressed concerns that this measure was developed using ICD-9 codes that are not indicative of the current healthcare environment which utilizes ICD-10 codes. One commenter noted there is no longer a specific diagnosis code for "admission for rehab" in the ICD-10 codes.

Response: We thank commenters for their feedback. The measures are currently being respecified with ICD-10 data, prior to submission to NQF for endorsement. Identification of admissions for rehabilitation and other exclusion criteria, surgical and

non-surgical service-line division placement, and risk adjustment will be updated using ICD-10 data.

Comment: One commenter sought clarification in the cross-over of CEHRT to submit information for hybrid measures.

Response: We have not yet determined any future implementation pathway or timeline for this measure. Any proposal to adopt the Hybrid HWM measure into the Hospital IQR Program measure set would be made through future rulemaking. Should we decide to move forward with proposing to include the Hybrid HWM measure into the Hospital IQR Program in the future, we will consider the certification requirements applicable to hybrid measures at that time.

Comment: Some commenters had concerns about the validity of the hybrid version of the measure given the small sample size it would have as a voluntary measure should only a fraction of the nation's acute care hospitals participate.

Response: We thank the commenters for their feedback. The Hybrid Hospital-Wide Readmission measure, which uses a nearly identical set of EHR data elements, was implemented as a voluntary measure in the Hospital IQR Program for the reporting period from January 2018 through June 2018. We are actively compiling stakeholder feedback on the electronic specifications for the EHR data elements, their extraction, and on the data submission process. Because the Hybrid HWM measure uses a nearly identical set of data elements, we believe the experience gained through the voluntary reporting of the Hybrid HWR measure would potentially facilitate implementation of the

Hybrid HWM measure should we move forward with proposing to include the measure in the Hospital IQR Program through future rulemaking.

Comment: Several commenters did not believe the HWM measure is sensitive enough to accurately capture hospital quality. They noted that there are few performance outliers identified and questioned whether this measure would provide actionable data to inform quality improvement for hospitals or meaningful information to patients about the quality of hospitals. One commenter suggested that preventable mortality represents only a fraction of the overall mortality rates and that the simple variation in rates might be due to non-modifiable factors rather than quality of care. To address this variation, they suggested that the measure score improvement should be reported rather than the measure rate alone.

Response: Although there are not many statistical performance outliers, we believe that the measure can still convey meaningful performance information. Using 95 percent confidence interval (uncertainty) estimates to categorize hospital outliers is conservative by design, meaning that the measure is designed to only declare a hospital as an outlier with a very high degree of certainty. But the overall distribution of mortality rates show meaningful variation. We found that the claims-only overall hospital risk-standardized mortality rates ranged from 5.0 percent to 9.8 percent with a median risk-standardized mortality rate of 7.4 percent.<sup>320</sup> This variation provides information about the range of quality among hospitals and will allow hospitals and consumers to see if a

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<sup>320</sup> Claims-Only Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure: Measure Methodology for Public Comment. Available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/PC-Updates-on-Previous-Comment-Periods.html>.

hospital is at the high end or the low end of the range. We believe reporting hospital mortality scores will improve transparency and promote quality improvement efforts. This measure identified 2.6 percent of hospitals as outliers, which is consistent with other CMS condition- and procedure-specific measures that display a range of 2.5 percent to 11.2 percent of hospitals as outliers.

Should we move forward with proposing to include either of these measures for inclusion in the Hospital IQR Program in the future, in advance of public reporting, hospitals would receive confidential, service-line division and patient-level data to support quality improvement. This information would allow for thorough investigation of patient scenarios that resulted in mortality and, therefore, that contributed to each division-level standardized mortality ratios, which are rolled up into the overall risk-standardized mortality rate. We will continue to consider the best approach for communicating meaningful variation in performance and optimizing the usefulness of this measure for the public. This includes consideration of reporting improvement in scores in addition to hospitals' performance in a single measurement period.

Comment: Several commenters did not support the inclusion of either version of the HWM measure in the Hospital IQR Program because they felt these measures are very broad and require more testing. Some commenters felt this measure would fail to enhance quality improvement efforts and noted that the condition-specific measures in the Hospital VBP Program are more actionable.

Response: We appreciate commenters' interest in the information provided by the narrower condition-specific measures, but believe that while the Hospital-Wide

Mortality measure assesses a broad population, it serves an important complementary purpose. In contrast to the condition-specific measures, a hospital-wide measure provides a picture of a hospital's overall quality and thereby complements the condition-specific mortality measures. The measure underwent significant testing of the risk variables, performance of the risk models for each service-line division, and the overall measure score. In addition, we compared hospital-level results from the claims-only measure with the Hybrid Hospital-Wide Mortality measure to establish the validity of the claims-only risk model. All testing results support the reliability and validity of the measure construct and methodology.

In addition, the Hospital-Wide Mortality measure was developed to broadly measure the quality of care across hospitals, including the quality of care in smaller volume hospitals that might lack sufficient numbers of patients to be included in condition-specific mortality measures. Mortality is an important health outcome that is meaningful to patients and providers, and updated estimates suggest that more than 400,000 patients die each year from preventable harm in hospitals.<sup>321</sup> In addition, this measure captures a broader group of patients than those included in condition- and procedure-specific mortality measures.

The Hospital-Wide Mortality Measure was also designed to support quality improvement efforts. By giving a hospital-wide quality score, the measure provides hospitals and the public with an overall evaluation of a hospital's performance on an important outcome. The Hospital-Wide Mortality measure, both with respect to the

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<sup>321</sup> James JT. A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety*. 2013;9(3):122-128.

overall score as well as the division-level results, provides actionable information to hospitals that can support important quality improvements. Should we move forward with proposing to include either or both the hybrid or claims-based version of these measures for inclusion in the Hospital IQR Program, hospitals would receive detailed service-line and patient-level data along with their hospital-wide mortality performance scores. This patient-level detail can help a hospital decide where to focus its quality improvement efforts.

We thank the commenters and we will consider their views as we develop future policy regarding the potential inclusion of claims-only hospital-wide mortality measure and hybrid hospital-wide mortality measure with electronic health record data in the Hospital IQR Program.

b. Potential Future Inclusion of the Hospital Harm – Opioid-Related Adverse Events  
Electronic Clinical Quality Measure (eCQM)

(1) Background

Opioids are among the most frequently implicated medications in adverse drug events among hospitalized patients. The most serious opioid-related adverse events include those with respiratory depression, which can lead to brain damage and death. Opioid-related adverse events have both negative patient impacts and financial implications. These patients have been noted to have 55 percent longer lengths of stay, 47 percent higher costs, 36 percent higher risk of 30-day readmission, and 3.4 times

higher payments than patients without these adverse events.<sup>322</sup> While noting that data are limited, The Joint Commission suggested that opioid-induced respiratory arrest may contribute substantially to the 350,000-750,000 in-hospital cardiac arrests annually.<sup>323</sup>

Most opioid-related adverse events are preventable. Of the opioid-related adverse drug events reported to The Joint Commission's Sentinel Event database,<sup>324</sup> 47 percent were due to a wrong medication dose, 29 percent to improper monitoring, and 11 percent to other causes (for example, medication interactions and/or drug reactions). In addition, in an analysis of a malpractice claims database, a review of cases in which there was opioid-induced respiratory depression among post-operative surgical patients, 97 percent of these adverse events were judged preventable with better monitoring and response.<sup>325</sup> While hospital quality interventions such as, proper dosing, adequate monitoring, and attention to potential drug interactions that can lead to overdose are key to prevention of opioid-related respiratory events, the use of these practices can vary substantially across hospitals.

Administration of opioids also varies widely by hospital, ranging from 5 percent in the lowest-use hospital to 72 percent in the highest-use hospital.<sup>326</sup> Notably, hospitals that use opioids most frequently have increased adjusted risk of severe opioid-related

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<sup>322</sup> Kessler ER, Shah M, Gruschkkus SK, et al. Cost and quality implications of opioid-based postsurgical pain control using administrative claims data from a large health system: opioid-related adverse events and their impact on clinical and economic outcomes. *Pharmacotherapy*. 2013; 33(4):383-391.

<sup>323</sup> Overdyk FJ. Postoperative respiratory depression and opioids. *Initiatives in Safe Patient Care*. 2009. Available at: <http://files.sld.cu/anesthesiologia/files/2012/01/postoperative-respiratory-depression-opioids.pdf>.

<sup>324</sup> The Joint Commission. Safe use of opioids in hospitals. *The Joint Commission Sentinel Event Alert*. 2012; 49:1-5. [https://www.jointcommission.org/assets/1/18/SEA\\_49\\_opioids\\_8\\_2\\_12\\_final.pdf](https://www.jointcommission.org/assets/1/18/SEA_49_opioids_8_2_12_final.pdf).

<sup>325</sup> Lee LA, Caplan RA, Stephens LS, et al. Postoperative opioid-induced respiratory depression: a closed claims analysis. *Anesthesiology*. 2015; 122(3):659-665.

<sup>326</sup> Herzig SJ, Rothberg MB, Cheung M, et al. Opioid utilization and opioid-related adverse events in nonsurgical patients in US hospitals. *J Hosp Med*. 2014; 9(2):73-81.

adverse events.<sup>327</sup> Surgical patients are at particular risk of these adverse events because opioid administration is common in this population. For example, among a diverse group of surgical patients undergoing common surgical procedures at a large medical center, 98.6 percent received opioids and 13.6 percent of those patients experienced an opioid-related adverse drug event.<sup>328</sup> Reduction of adverse events in surgical and non-surgical patients receiving opioids, may be enhanced by measuring the rates of these events at each hospital in a systematic, comparable way. We have developed the Hospital Harm -- Opioid-Related Adverse Events eCQM to assess the rates of these adverse events as well as the variation in rates among hospitals.

## (2) Overview of Measure

The Hospital Harm – Opioid-Related Adverse Events eCQM outcome measure assesses, by hospital, the proportion of patients who had an opioid-related adverse event. This measure addresses the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care. The measure uses the administration of naloxone, an opioid reversal agent that has been used in a number of studies as an indicator of opioid-related adverse respiratory events, to indicate a harm to a patient.<sup>329, 330</sup> The intent of this measure is for hospitals to track and improve their monitoring and response to patients administered opioids during hospitalization, and to

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<sup>327</sup> Ibid.

<sup>328</sup> Kessler ER, Shah M, Gruschkkus SK, et al. Cost and quality implications of opioid-based postsurgical pain control using administrative claims data from a large health system: opioid-related adverse events and their impact on clinical and economic outcomes. *Pharmacotherapy*. 2013; 33(4):383-391.

<sup>329</sup> Eckstrand JA, Habib AS, Williamson A, et al. Computerized surveillance of opioid-related adverse drug events in perioperative care: a cross-sectional study. *Patient Saf Surg*. 2009; 3:18.

<sup>330</sup> Nwulu U, Nirantharakumar K, Odesanya R, et al. Improvement in the detections of adverse drug events by the use of electronic health and prescription records: an evaluation of two trigger tools. *Eur J Clin Pharmacol*. 2013; 69(2):255-259.

avoid harm, such as respiratory depression, which can lead to brain damage and death. This measure focuses specifically on in-hospital opioid-related adverse events, rather than opioid overdose events that happen in the community and may bring a patient into the emergency department. We acknowledge that some stakeholders have expressed concern that some providers could withhold the use of naloxone, believing that may help those providers avoid poor performance on this quality measure. This measure is not intended to incentivize hospitals to not administer naloxone to patients who are in respiratory depression, but rather incentivize hospitals to closely monitor patients who receive opioids during their hospitalization to prevent respiratory depression or other symptoms of opioid overdose. In addition, the aim of this measure is not to identify preventability of an individual harm instance or whether each instance of harm was an error, but rather to assess the overall rate of the harm within a hospital incorporating a definition of harm that is likely to be reduced as a result of hospital best practice.

As with all quality measures we develop, testing was performed to establish the feasibility of the measure, data elements, and validity of the numerator. Clinical adjudicators reviewed medical records on each instance of a harm identified through query of the EHR data to confirm naloxone was in fact administered to reverse symptoms of opioid overdose. Additional testing is currently being performed to establish the data element validity using output from the Measure Authoring Tool (MAT)<sup>331</sup> in multiple hospitals, using multiple EHR systems. The MAT is a web-based tool used to develop the electronic measure specifications, which expresses complicated measure logic in

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<sup>331</sup> The Measure Authoring Tool (MAT) is a web-based tool used by measure developers in the creation of eMeasures. For additional information, we refer readers to: <https://www.emasuretool.cms.gov/>

several formats including a human-readable document. The electronically extracted data would be validated by comparison to medical chart abstracted data.

This measure addresses the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care discussed in section I.A.2. of the preamble of the proposed rule. The Hospital Harm - Opioid-related Adverse Events (MUC17-210) was included in a publicly available document entitled “2017 Measures Under Consideration List” (available at:

<http://www.qualityforum.org/ProjectMaterials.aspx?projectID=75367>). This measure was reviewed by the NQF MAP Hospital Workgroup in December 2017 and received the recommendation to refine and resubmit for consideration for programmatic inclusion, as referenced in the 2017-2018 Spreadsheet of Final Recommendations to HHS and CMS (available at:

<https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86972>).

For additional information and discussion of concerns and considerations raised by the MAP related to this measure, we refer readers to the December 2017 NQF MAP Hospital Workgroup meeting transcript (available at:

<http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=87148>).

MAP stakeholders acknowledged the significant health risks associated with opioid-related adverse events, but recommended adjusting the numerator to consider the impact on chronic opioid users.<sup>332</sup> Accordingly, we will address this issue in upcoming

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<sup>332</sup> Measure Application Partnership. MAP 2018 Considerations for Implementing Measures in Federal Programs: Hospitals. Washington, DC: NQF; 2018. Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=87083>

testing and NQF review. Regarding MAP stakeholder concern that the measure needs to be tested in more facilities to demonstrate reliability and validity, as stated previously, we are currently testing the MAT output for this measure in multiple hospitals that use a variety of EHR systems.<sup>333</sup> We plan to submit this measure for NQF endorsement as part of the Patient Safety Committee in November 2018.

### (3) Cohort

The measure denominator includes all patients 18 years or older discharged from an inpatient hospital encounter during the 1-year measurement period. The measure includes inpatient admissions that were initially seen in the emergency department or in observational status and then admitted to the hospital.

### (4) Outcome

The numerator for this electronic outcome measure is the number of patients who received naloxone outside of the operating room either: (1) after 24 hours from hospital arrival; or (2) during the first 24 hours after hospital arrival with evidence of hospital opioid administration prior to the naloxone administration. We narrowed cases to exclude naloxone use in the operating room where it could be part of the sedation plan as administered by an anesthesiologist. Use of naloxone for procedures outside of the operating room (such as bone marrow biopsy) are counted in the numerator as it would indicate the patient was over sedated. These criteria exist to ensure patients are not considered to have experienced harm if they receive naloxone in the first 24 hours due to an opioid overdose that occurred in the community prior to hospital arrival. We do not

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<sup>333</sup> Ibid.

require the administration of an opioid prior to naloxone after 24 hours from hospital arrival because an event occurring 24 hours after admission is most likely due to hospitals' administration of opioids. By limiting the requirement of documented opioid administration to the first 24 hours of the encounter, we are reducing the complexity of the measure logic and therefore the burden of implementation for hospitals. For more information about the measure specifications, we refer readers to our MAT Header (measure specs) and framing document (available at:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Public-Comments.html>).

We invited public comment on the possible future inclusion of the Hospital Harm - Opioid-related Adverse Events eCQM in the Hospital IQR Program. Specifically, we sought public comment on whether to: (1) initially introduce this measure as voluntary; (2) adopt the measure into the existing eCQM measure set from which hospitals currently select four to report; or (3) adopt the measure as mandatory for all hospitals to report. In addition, we sought public comment on ways to address any potential unintended consequences resulting from future implementation of this measure. We are also considering future adoption of this measure in the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) for Clinical Quality Measures (CQM) electronic reporting by eligible hospitals and CAHs.

Comment: Several commenters expressed either outright or conditional support for the Hospital Harm—Opioid-Related Adverse Events Electronic Clinical Quality

Measure (eCQM). Several commenters believed this measure would be useful and important.

Response: We thank the commenters for their support.

Comment: A number of commenters recommended various implementation pathways for the measure. Many commenters recommended that reporting on the Hospital Harm—Opioid-Related Adverse Events Electronic Clinical Quality Measure (eCQM) be made voluntary prior to mandatory reporting in either the Hospital IQR or Promoting Interoperability Programs, specifically until validity and feasibility of the measure has been proven, and the NQF has endorsed it. Several commenters recommended that CMS incorporate this measure into the eCQM measure set from which hospitals select four eCQMs to report, while one commenter specifically supported its inclusion in the Hospital IQR and PI Programs as a mandatory measure. A few commenters noted that if this measure is implemented, measure submission should count toward one of eCQMs required for the PI Program.

One commenter suggested that CMS limit the use of this measure to public reporting and quality improvement programs, rather than value-based purchasing programs. A few commenters recommended that CMS complete measure specification and testing prior to implementation and consider implementation only after the 2018 eCQM annual updates. Several commenters suggested that CMS provide education to hospitals on how to utilize this measure to improve patient safety. A few commenters asked for clarification on whether health IT developers will be required to support or certify the measure if it is introduced on a voluntary basis.

Response: We thank commenters for their feedback and we will consider all suggestions for measure implementation and stakeholder outreach for future program years. We will complete specifications for the measure and measure validity and reliability testing prior to proposing this measure for future inclusion in the Hospital IQR Program. We have performed measure testing in multiple hospitals with various EHR systems to establish the feasibility of this measure as well as the validity of the data elements and the numerator. Additional testing is currently being performed to provide information about the feasibility and data element validity based on output from the Measure Authoring Tool (MAT) in multiple hospitals, using multiple EHR systems. We reiterate that we intend to submit this measure to the NQF for endorsement as part of the Patient Safety Committee as early as FY 2019. We will continue to engage stakeholders in the development of this measure. Any proposals for future adoption of this measure will be announced through rule-making.

Comment: Commenters raised concerns that the measure does not capture opioid-related adverse events that occur outside of the hospital. One commenter expressed concern that including naloxone administered in the hospital to reverse a narcotic overdose that occurred outside of the hospitals would place unwarranted blame on hospitals.

Response: We thank commenters for sharing their concerns. This measure is not intended to measure opioid-related adverse events that occur outside of the hospital. This Hospital Harm eCQM focuses specifically on in-hospital opioid-related adverse events, rather than opioid overdose events that happen in the community. For naloxone

administration to be considered a harm, the measure requires documentation of hospital-administered opioids in the first 24 hours of a hospitalization (including patients treated in the emergency department or who are in observational status who become inpatient), with the intent to capture only naloxone administered due to overuse of narcotics that were given in the hospital and to exclude naloxone administered to reverse community-acquired opioid overdoses. The measure is designed to focus on the quality of care and to capture a specific harm: naloxone given due to opioid administration that occurred within the hospital.

Comment: Commenters suggested several changes to the measure specifications, including excluding instances in which naloxone is administered by an anesthesiologist, or to patients with opioid sensitivity. Two commenters suggested including only patients with documented respiratory failure in presence of narcotic administration. Commenters also advised considering stratification rather than risk adjustment, particularly for chronic opioid users.

Response: We thank commenters for their recommendations regarding potential measure exclusions and stratification. We aim to be as inclusive as possible in defining a measure cohort to ensure the measure will have an impact on the broadest possible group of patients at risk of the outcome. We also intend to minimize the complexity of the measure specifications to reduce burden to hospitals when implementing the measure. The measure does exclude instances in which naloxone is administered in the operating room where it could be part of the sedation plan administered by an anesthesiologist. Regarding the comments on including only patients with documented respiratory failure

in presence of narcotic administration, we believe that using EHR data to capture respiratory failure may not be consistently feasible or consistent across different hospital systems. Given that naloxone is primarily administered when a patient has severe responses to an opioid overdose, it has been used as a surrogate for important adverse reactions and is more feasible to capture.<sup>334</sup> We will continue to consider the suggested modifications to the cohort during measure testing.

Regarding commenters' suggestions about measure stratification and risk adjustment, this measure does not require a data element for chronic opioid users. We do not anticipate risk adjusting this measure for chronic opioid use, as most instances of opioid-related adverse events should be preventable for all patients regardless of prior exposure to opioids or chronic opioid use. In addition, there are several risk factors that affect sensitivity to opioids that physicians should consider when dosing opioids. Risk adjustment would only be needed if certain hospitals have patients with distinctly different risk profiles that cannot be mitigated by providing high-quality care. Similarly, the current measure specification does not include stratification of patients for chronic opioid use for three reasons: (1) this is a challenging data element to capture consistently in the EHR; (2) chronic opioid use should be taken into consideration by clinicians in determining dosing in the hospital and theoretically should not be considered a different risk level for patients; and (3) stratification can reduce the effective sample size of a measure and make it less useable.

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<sup>334</sup> Agency for Healthcare Research and Quality. (2016). *National Scorecard on Rates of Hospital-Acquired Conditions 2010-2015: Interim Data from National Efforts to Make Health Care Safer*. Retrieved from: <https://www.ahrq.gov/professionals/quality-patient-safety/pfp/2015-interim.html>.

Comment: Multiple commenters discussed the potential burden of the measure on hospitals, and the feasibility of the required EHR data elements. Several commenters believed all required data elements are readily available in the EHR, while several other commenters disagreed, and noted challenges in mapping the required data elements and the complex measure logic. One commenter questioned whether manual abstraction would be necessary to report this measure. Another commenter noted that some hospitals lack EHRs in procedural or surgical areas, which might bias their results. One commenter noted that the costs associated with this measure outweigh the benefits, which is contrary to the Meaningful Measures Initiative. One commenter noted that many providers will not have enough time to update their reporting systems if detailed specifications are not provided far enough in advance.

Response: We appreciate commenters' concerns. The measure specifications were developed with the end-user in mind and with the goal of minimizing the burden on hospitals. Testing has demonstrated that the data elements and measure logic are feasible and accurately capture opioid-related adverse events using EHR data. This measure should not require manual chart abstraction. To clarify, currently, the measure specifications capture naloxone administration in post-procedural areas as a harm, but not naloxone administered in procedural areas, such as operating rooms. We recognize that stakeholders would require time to prepare for mandatory reporting and we will consider that need as we make decisions about proposing to add measures to the Hospital IQR Program in future years. We aim to provide measure specifications that are simple,

useful, and provide as much information as possible to ease the burden of data collection and reporting.

Comment: Many commenters noted the potential negative unintended consequences of the measure, and disagreed with using naloxone as a proxy for opioid-related adverse events. These commenters asserted that the use of naloxone does not necessarily mean a harm was caused by an opioid. One commenter stated that preliminary results presented to the NQF MAP Hospital Workgroup in December 2017 showed a high “error rate,” and expressed concern that these results will only be magnified in broader testing. Another commenter noted the low event rate of this harm. One commenter requested additional evidence, based on the tracking of performance on this measure when implemented, to ensure that the measure does not inappropriately incentivize providers to withhold naloxone before the measure is made mandatory. Several commenters expressed interest in whether there is true performance variation for this measure in care across hospitals.

Response: We thank commenters for their feedback. We acknowledge that naloxone administration alone does not conclusively indicate a harm. For example, in some cases naloxone can be given to reverse severe itching related to opioids.<sup>335</sup> The intent of the measure is not to reduce appropriate use of naloxone or to bring the rate of administration to zero. Rather, the measure is intended to identify hospitals that have particularly high rates of naloxone use relative to others, and thereby incentivize improved clinical practices, such as appropriate dosing of opioids and monitoring of

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<sup>335</sup> Eckstrand JA, Habib AS, Williamson A, et al. Computerized surveillance of opioid-related adverse drug events in perioperative care: a cross-sectional study. *Patient Saf Surg.* 2009;3(1):18.

patients to reduce the need for naloxone use in patient care. We do not believe that this measure would deter providers from prescribing opioids or using naloxone for patients who require it. The goal is to incentivize hospitals to avoid over-sedation and to closely monitor patients on opioids.

Moreover, naloxone administration has been used in a number of studies as an indicator of opioid-related adverse respiratory events.<sup>336,337</sup> Prior testing in five hospitals showed the measure captured the intended harm, by assessing whether each harm identified in the measure could be confirmed through clinical review of the patients' medical record. In 93.9 percent of events, adjudicators noted that naloxone was administered because of excessive opioid medication administration. To clarify testing results around an "error rate," we believe the commenter is referring to the success rate of capturing the intended harm, which ranged from 87.2 percent to 95.7 percent across five hospitals. We agree that this measure has a low event rate, nonetheless, we believe hospital-caused opioid overdoses are important to measure. Opioids are among the most frequently implicated medications in adverse drug events among hospitalized patients, with the most serious opioid-related adverse events leading to brain damage and death.<sup>338</sup> Further, this measure addresses the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care. Regarding commenters' interest in whether there will be true performance variation in care across

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<sup>336</sup> Eckstrand JA, Habib AS, Williamson A, et al. Computerized surveillance of opioid-related adverse drug events in perioperative care: a cross-sectional study. *Patient Saf Surg*. 2009; 3:18.

<sup>337</sup> Nwulu U, Nirantharakumar K, Odesanya R, et al. Improvement in the detections of adverse drug events by the use of electronic health and prescription records: an evaluation of two trigger tools. *Eur J Clin Pharmacol*. 2013; 69(2):255-259.

<sup>338</sup> The Joint Commission. (2012). Safe use of opioids in hospitals. *Sentinel Event Alert*, 49, 1-5.

hospitals, preliminary testing showed variation in event rates across the set of testing hospitals. This measure is undergoing continued testing and we will continue to examine the extent of performance variation captured by the measure. We continue to believe that the measure specifications are appropriate for this measure and if this measure were to be proposed for future inclusion in the Hospital IQR Program, any unintended consequences would be closely monitored during measure reevaluation.

Comment: Commenters voiced additional concerns and sought clarification about the measure specifications. One commenter sought clarification regarding whether patients seen in the emergency department were included in the measure specifications. One commenter noted changes in the measure specifications from what was reviewed by the NQF MAP Hospital Workgroup in December 2017, and the measure specifications outlined in the FY 2019 IPPS/LTCH PPS proposed rule. Two commenters recommended changing the numerator to require documentation of opioid administration prior to naloxone administration in all cases, and noted this would illuminate opportunities for hospital process improvement. One commenter sought clarification on the numerator since this measure only counts one harm per patient, and would not capture multiple harms to the same patient.

Response: We thank the commenters for their feedback. The measure's initial population and denominator includes patients treated in the emergency department or who are in observational status who become inpatients. The Hospital Harm—Opioid-Related Adverse Events eCQM measure specifications were originally submitted to the “2017 Measures Under Consideration List” (available at:

<http://www.qualityforum.org/ProjectMaterials.aspx?projectID=75367>), included documentation on a respiratory stimulant within 24 hours of opioid administration as representative of a harm to a patient, and required documentation of an opioid administration within the hospital within 24-hours of the narcotic antagonist. This measure was simplified after preliminary testing, to not include a respiratory stimulant and only to require documentation of an opioid administration prior to naloxone within the first 24-hours of the hospitalization. Previous testing of the measure indicated that we did not miss harm events when the measure logic was simplified in this manner. These modifications were made to reduce the complexity of the measure specifications while still capturing a signal of hospital quality. The results from hospital testing presented at the NQF MAP Hospital Workgroup meeting in December 2017 represented the final measure specifications as described in this final rule.

The measure does capture only a single harm for each patient and does not capture multiple harms on a single patient during a single inpatient encounter. The numerator captures the number of patients who experience a harm, rather than the number of harms occurring to simplify the measure and limit the reporting burden, while still capturing a signal of hospital quality. For more information on the specifications of this measure, we refer readers to the MAT Header (measure specifications) and framing document (available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Public-Comments.html>).

Comment: Some commenters did not support the Hospital Harm—Opioid-Related Adverse Events eCQM, and proposed alternative measures to address the opioid

epidemic. One commenter recommended that CMS consider including non-pharmacologic technologies such as medical devices to serve as alternatives to treat acute and chronic pain. Several commenters suggested providing education to patients to help prevent or reduce the risk of addiction.

Response: We thank commenters for their feedback and suggestions on additional potential opioid measures. We appreciate the suggestions and we intend to consider other ways the Hospital IQR Program can address the opioid crisis. While this measure may not address all root causes of opioid overuse, it addresses the Meaningful Measures Initiative quality priority of making care safer by reducing harm caused in the delivery of care.

We thank the commenters and we will consider their views as we develop future policy regarding the potential inclusion of the Hospital Harm – Opioid-Related Adverse Events Electronic Clinical Quality outcome measure (eCQM) in the Hospital IQR Program.

#### c. Potential Future Development and Adoption of eCQMs Generally

Stakeholders continue to identify areas for improvement in the implementation of eCQMs under a variety of CMS programs, including the Hospital IQR Program and the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs). While effective utilization of eCQMs promises greater efficiency and more timely access to data to support quality improvement activities, various types of costs associated with these measurement approaches detract from these benefits. Moreover, some providers may have low

awareness of the resources and tools available to help address issues that arise in utilizing eCQMs.

Program design and operations associated with measurement aspects of these programs can be a significant source of cost for providers. Uncertainty around rapidly shifting timelines and requirements can pose significant financial and operational planning challenges for organizations, while lack of alignment across programs results in further complexity. In addition, the implementation of eCQMs within the EHR is a significant source of cost. Health IT products vary widely in the eCQMs they offer, and incorporating new measure specifications into a product, along with validation and testing of the updates, can be challenging and time-consuming. Lack of transparency from developers around data sources within the EHR, mapping, measure calculations, and reporting schemas, can hinder providers' ability to implement eCQMs and ensure the accuracy of results. Moreover, challenges in extracting data from the EHR and integrating with other applications can serve as a source of cost for providers seeking to bring together different technology solutions and work with other third party services to complete reporting and quality improvement activities.

Stakeholders have expressed support for increasing the availability of new eCQMs, developing eCQMs that focus on patient outcomes and higher impact measurement areas, and exploring how eCQMs can reduce the costs and information collection burden associated with chart-abstracted measures. However, they have also identified barriers which may contribute to a lack of adequate development of eCQMs and limit their potential, including long development timelines, lack of

guidelines/prioritization of and participation in eCQM development, limited field testing, and program policies that limit innovation by focusing on “least common denominator” approaches.

We sought stakeholder feedback on ways that we could address these and other challenges related to eCQM use. Specifically, we invited comment on the following questions: (1) What aspects of the use of eCQMs are most costly to hospitals and health IT vendors?; (2) What program and policy changes, such as improved regulatory alignment, would have the greatest impact on addressing eCQM costs?; (3) What are the most significant barriers to the availability and use of new eCQMs today?; (4) What specifically would stakeholders like to see us do to reduce costs and maximize the benefits of eCQMs?; (5) How could we encourage hospitals and health IT vendors to engage in improvements to existing eCQMs?; (6) How could we encourage hospitals and health IT vendors to engage in testing new eCQMs?; (7) Would hospitals and health IT vendors be interested in or willing to participate in pilots or models of alternative approaches to quality measurement that would explore less burdensome ways of approaching quality measurement, such as sharing data with third parties that use machine learning and natural language processing to classify quality of care or other approaches?; (8) What ways could we incentivize or reward innovative uses of health IT that could reduce costs for hospitals?; and (9) What additional resources or tools would hospitals and health IT vendors like to have publicly available to support testing, implementation, and reporting of eCQMs?

Comment: Question 1. A number of commenters responded to CMS' request for feedback on question (1) -- What aspects of the use of eCQMs are most costly to hospitals and health IT vendors? Many commenters believed the costliest aspect of eCQM use is vendor cost to build, develop, implement, adequately test, and maintain eCQMs. This includes vendor support costs to develop and install code updates following changes to measures and program requirements made through rulemaking. A few commenters noted the significant labor cost associated with validation of eCQM reports, including re-validation of those reports, as they need to be re-validated after every software upgrade or enhancement. One commenter noted that there is considerable burden required to map the necessary data elements from the EHR to the appropriate QRDA format, and some vendors are not properly equipped to collect and transmit such data through the CMS portal.

Many commenters also noted high personnel costs, including the personnel time and cost associated with keeping pace with on-going certification, mandated reporting, and annual program update change requirements, as well as the costs associated with training personnel if changes to eCQM reporting requirements are outside out of the normal workflow. A few commenters added that eCQM implementation requires utilization of resources from multiple disciplines, including IT, data science, quality, analytics, clinicians, laboratory, radiology, coding, and billing.

Many commenters believed that eCQMs are costly because of the uncertainty around the reporting and submission requirements, including the high burden associated with making preparations to report measures that have been identified for removal in the

near future. In addition, several commenters noted that the time between the finalization of a new quality measure in the rules and its inclusion in a government incentive or penalty program is too short, resulting in heightened resource use and high burden.

A few commenters expressed concern that there are high costs associated with collecting and reporting data on measures that they believe are fundamentally unusable or not valuable because they include errors or do not appropriately serve clinician needs. Other commenters noted that the manual abstraction and documentation requirements associated with some eCQMs add to the total administrative burden placed on clinicians. One commenter explained that there is high burden associated with alignment following a facility's merger with a larger system.

Question 2. A number of commenters responded to CMS' request for feedback on question (2) -- What program and policy changes, such as an improved regulatory alignment, would have the greatest impact on addressing eCQM costs? A number of commenters suggested program and policy changes that might impact the costs associated with eCQM reporting, including: (1) aligning the regulatory and reporting requirements and timeframes for eCQMs across federal and State programs; (2) adopting nationally standardized eCQMs; (3) streamlining and de-duplicating measure sets across CMS programs; (4) providing more time to implement new measures or measure specification updates and reducing the frequency of changes to the reporting requirements; (5) implementing broader eCQM selections and continuing to offer flexibility for hospitals to self-select and submit data on available measures best suited to their needs that would satisfy multiple reporting programs with a single data submission;

(6) focusing on current challenges and not adopting new eCQMs for a period of time, then introducing new eCQMs at a slower pace and in lower volumes; (7) creating a single, facility-based quality reporting program that encompasses inpatient, outpatient, and observation statuses; (8) providing more transparency around program changes, including decision-making criteria geared more toward clinicians, for retaining or removing measures; (9) offering scoring bonuses that incentivize technology utilization; (10) utilizing eCQM data already collected to inform future program requirements and stakeholders about successful practices; (11) requiring reporting only on the eCQM version of measures, and not the chart-abstracted versions, and phasing out claims-only outcomes reporting, or implementing a point system which would assess more points for submission of eCQMs than for chart-abstracted measures to satisfy multiple reporting programs; and (12) identifying quality reporting requirements in a separate rulemaking process.

Several commenters recommended that CMS regulate the amount charged by health IT vendors for new packages and updates, reimburse hospitals for the cost of software updates needed to meet quality reporting requirements, or provide grants to hospitals for these purposes.

Some commenters provided feedback specifically related to eCQM testing, including: (1) releasing technical measure specifications earlier; (2) allowing vendors to engage in early testing; (3) making the Pre-Submission Validation Application (PSVA) tool and QualityNet secure portal available before the start of the reporting year;

(4) facilitating testing through shared infrastructure; and (5) providing timely answers to questions submitted via the JIRA case system.

A number of commenters focused on improvements that could be made regarding measure development, measure specification, and measure standards, including:

(1) developing eCQMs based on available data and the provision of care; (2) working with the Office of the National Coordinator to develop interoperability and EHR data standards, including defining standards for quality reporting and further aligning existing QRDA standards; (3) working with industry stakeholders in the early stages of measure development; (4) promoting accurate provider attribution; and (5) utilizing eCQMs that pull from common data fields rather than data codes.

Some commenters recommended changes that could be made with regards to measure submission, including: (1) developing a mechanism to allow facilities to manually correct data once pulled; (2) providing updates to the value set and QRDA I file submission in advance; (3) providing more detailed information on submission errors and providing submission reports earlier; (4) providing avenues for data submission other than hospitals submissions, such as having The Joint Commission obtain eCQM data from QualityNet; and (5) creating a single submission reporting platform for multiple CMS programs and State Medicaid agencies to accept quality data submissions provided to CMS.

Question 3. A number of commenters responded to CMS' request for feedback on question (3) -- What are the most significant barriers to the availability and use of new eCQMs today? Many commenters observed significant barriers to the availability and

use of new eCQMs. Several commenters expressed their belief that the technology costs, including EHR systems upgrades, adapting workflows, aligning documentation of care to capture required data, shifting timelines, building new specifications, testing and validating new measures, purchasing additional modules for reporting, is a barrier to implementation and reporting on new eCQMs. Other commenters identified lack of alignment across programs as another barrier. One commenter suggested that lack of transparency from developers and the variation in eCQM offerings for reporting new eCQMs also presents a barrier to eCQM reporting. A few commenters expressed their belief that the impact on clinical workflows where eCQMs require documentation that is not part of existing workflows, which actually increases burden on hospitals as compared with reporting on non-eCQM measures, is a significant barrier to reporting on new eCQMs, as is the fact that many EHRs allow for narrative documentation which does not flow into the discrete fields required by eCQMs.

One commenter recommended that CMS limit costs by imposing requirements related to pricing or reimbursement for the purchase of additional reporting modules. Another commenter recommended that CMS consolidate available information on eCQMs into one website that would provide both technical and operational information, and requested additional resources to help standardize and simplify the complexity of codes. A few commenters asserted their belief that measure accuracy and the vague wording of measures causes confusion between developers and providers regarding the intent of the measure, which can present a significant barrier to reporting on new eCQMs.

A few commenters remarked on their perceived lack of value or impact on quality improvement associated with eCQM reporting.

Some commenters recommended that CMS provide additional support to vendors, to identify how best to capture required eCQM data, and to offer technical expert teams to organizations that lack the resources to participate in eCQM development or testing. One commenter expressed concern that hospitals and vendors are not ready to fully report on eCQMs and recommended that CMS work with EHR vendors, hospital quality staff, and other affected stakeholders to identify underlying structural problems and barriers to successful eCQM reporting. A few commenters noted that a major hurdle to reporting on new eCQMs is that EHR vendors are unwilling to participate in mapping or supporting voluntary measures, or prioritize certifying to report on existing measures above new measures. One commenter suggested that CMS work with the ONC to advance standards for CEHRT to develop robust interoperability and EHR data standards. Several commenters expressed their belief that more time is needed between the adoption of a new eCQM into the Hospital IQR Program and its required implementation by providers in part to accommodate vendors' need to build and test processes and develop reports. One commenter recommended that CMS identify a date by which the QualityNet Secure Portal will open for 2018 testing. One commenter stated that a barrier to the availability of new eCQMs was the measure development process, and suggested that CMS work to improve the development and approval process. One commenter recommended that CMS explore whether the burden of eCQM reporting could be shifted to billing operations.

Question 4. A number of commenters responded to CMS' request for feedback on question (4) -- What specifically would stakeholders like to see CMS do to reduce costs and maximize the benefits of eCQMs? Some commenters suggested removing all the eCQMs. Conversely, a few commenters expressed their preference for eCQM reporting and requested that CMS eliminate all chart-abstracted measures, and require all applicable eCQMs be reported for future program years.

A number of commenters provided feedback on how CMS could reduce costs and maximize the benefits of eCQM development, including: (1) streamlining the measure development process; (2) developing measures that rely on data elements already present in EHRs and that have direct links to improved outcomes; (3) refining current eCQMs to reflect different settings of care and patient populations; (4) refining measures to add exclusions instead of requiring extra chart documentation; (5) considering moving to improved standards-based eCQM development and reporting; (6) working with health IT vendors to identify and implement ways to present eCQM data to support quality improvements; (7) seeking feedback from other industry stakeholders; (8) connecting novice eCQM measure developers with experts; and (9) establishing a national testing infrastructure for eCQMs.

Several commenters provided feedback on how CMS could reduce costs and maximize the benefits of eCQM reporting, including: (1) making eCQM tools and resources available before the start of the reporting year; (2) ensuring there are systems in place to receive data seamlessly; (3) providing timely and accurate feedback reports; (4) supplying additional information on the error messages during the submission

process; (5) providing detailed measure specifications to ensure data is collected consistently across providers and communicating about individual indicators and their weights; (6) improving access to QualityNet for analytics personnel; (7) giving adequate, early notice of software updates; (8) improving interoperability of EHR systems; and (9) centralizing the proper resource for questions related to eCQMs.

Some commenters provided feedback on how CMS could reduce costs and maximize the benefits of eCQM through policy changes including: (1) aligning the eCQM reporting requirements across CMS programs; (2) requiring that vendors support reporting on all eCQMs in the Hospital IQR Program; (3) allowing hospitals to voluntarily report on new eCQMs rather than requiring reporting on new measures; (4) refraining from retroactively applying standards that are updated mid-year; (5) requiring reporting of the eCQM version only for measures also available in chart-abstracted form; (6) utilizing other sources of data rather than having hospitals report the eCQM data directly; (7) constraining the costs of vendor services; (8) sharing a plan for future eCQM use in the Hospital IQR Program; (9) changing the eCQM measure set less often and providing a longer time period to implement program changes (including adding new eCQMs or updating existing eCQMs); and (10) reducing the number of eCQMs available for reporting and only including those that are actionable with the highest return on investment.

A number of commenters recommended that CMS develop new eCQMs for specific chart-abstracted measures, including SEP-1, IMM-2, TOB-1, TOB-2, TOB-3, acute renal failure, ventilator use, and stroke. One commenter suggested refinements to

EHDI-1a eCQM. One commenter recommended that CMS require reporting on the PC-01 eCQM.

Question 5. A number of commenters responded to CMS' request for feedback on question (5) -- How could CMS encourage hospitals and health IT vendors to engage in improvements to existing eCQMs? A number of commenters suggested that hospitals and health IT vendors would be more willing to engage in improvements to existing eCQMs if CMS provided incentives, such as providing a per diem or honorarium for participation in focus groups and other forums.

A few commenters noted that participation would be enriched if hospitals were able to discuss eCQM improvement in the context of data from prior eCQM data submissions and be given an opportunity to inform future eCQM priorities that reduce reporting burden to advance improvements in the quality of care. One commenter suggested that CMS provide real-time feedback to hospitals on eCQM performance in order to encourage participating in eCQM improvement efforts.

Several commenters observed that successfully meeting mandatory eCQM reporting requirements depends on hospitals using the correct version of specifications, which is generally in the control of the EHR vendors, not the hospitals. Commenters urged CMS to continue outreach to EHR vendors, hospital quality staff, and other affected stakeholders to identify underlying structural problems and barriers to successful eCQM reporting. A number of commenters recommended coordinating efforts between CMS, CMS subcontractors, and measure stewards to solicit feedback from hospitals in order to implement a more efficient feedback loop.

One commenter believed that the introduction of voluntary measures has received increased interest and participation by providers, as it allows for more flexibility without the requirement for mandatory submissions.

Question 6. A number of commenters responded to CMS' request for feedback on question (6) -- How could CMS encourage hospitals and health IT vendors to engage in testing new eCQMs? A number of commenters suggested that hospitals and health IT vendors would be more willing to engage in testing new eCQMs if CMS provided incentives, such as: (1) supplementing or reimbursing the costs to trial eCQMs and provide feedback; (2) providing an upside APU adjustment to the hospitals that participate in testing a new eCQM; (3) providing scoring bonuses, or offering "bonus" points similar to those being proposed in the Promoting Interoperability Program; (4) allowing providers to receive credit for meeting the eCQM reporting requirement in the Promoting Interoperability Programs; (5) conducting an "Implementation-A-Thon;" and (6) granting providers participating in a defined testing and development program relief from other, mandated reporting, such as creating a "safe harbor" status for organizations that utilize their own vetted quality measurement systems or reducing the number of required eCQMs if the hospital is testing a measure.

Many commenters suggested that CMS should vet new eCQMs across a selection of vendors and hospitals prior to considering the measures for inclusion in a CMS quality reporting program for implementation.

A few commenters noted that the data produced by chart-abstracted measures varies significantly from eCQM data, and recommended that CMS adopt a validation

process and conduct robust testing to ensure eCQM data are accurate and comparable to chart-abstracted information. One commenter proposed a hybrid approach to eCQM adoption in which hospitals would submit eCQM data, but in the event of a measure failure, the hospital could also supplement the data with manual chart abstraction. The commenter noted that this approach would be mutually beneficial, as CMS would receive more accurate data and hospitals would learn their workflows and documentation gaps for improvement efforts. Moreover, this approach would be less burdensome than manual abstraction, without the fear of penalizing hospitals who are still working through the burden to transition to eCQMs. The commenter also advised that completed testing of eCQMs under development should demonstrate reliability and validity in the acute care setting and should also be submitted to NQF for review and endorsement prior to inclusion in CMS quality programs.

A few commenters noted that providers and vendors likely would be encouraged to engage more in testing if additional time were available by, for example, delaying major program changes to a biennial timeframe.

A number of commenters also recommended that CMS create a public “playbook” outlining eCQM development and testing activities available for hospitals, as well as issuing standardized expectations and processes for hospitals engaging in testing, and doing so with more advanced notice. One commenter also noted that the legal concerns with release of patient detail files sometimes limits involvement, and thus encouraged CMS to explicitly clarify policies with regard to sharing PHI in a protected and legal manner for testing and development.

Question 7. A number of commenters responded to CMS' request for feedback on question (7) -- Would hospitals and health IT vendors be interested in or willing to participate in pilots or models of alternative approaches to quality measurement that would explore less burdensome ways of approaching quality measurement, such as sharing data with third parties that use machine learning and natural language processing to classify quality of care or other approaches? A number of commenters expressed that hospitals and vendors would be interested in participating in pilots or models of alternative approaches to quality measurement. Several commenters provided suggestions on how to structure pilots, including developing a cross-section of participants, communications, and providing incentives for participants.

A few commenters expressed that hospitals and vendors would not want to participate in pilots because they would not want to divert resources necessary to pilot models that may never be incorporated into quality reporting, or expressed concern about the costs and resource tolls associated with participating.

One commenter specifically did not support research and pilot projects on the use of machine learning and natural language processing.

Question 8. A number of commenters responded to CMS' request for feedback on question (8) -- What ways could CMS incentivize or reward innovative uses of health IT that could reduce costs for hospitals? Many commenters shared recommendations about incentives and rewards for innovative uses of health IT, including: (1) providing an upside adjustment to the hospital APU or a larger increase in the Market Basket Increase for completing certain activities or demonstrating innovative uses of HIT;

(2) offering “bonus points” for demonstrable innovative uses of health IT; (3) providing scoring bonuses to providers who report more than the required number of measures or who have accurate rates; (4) allowing “bonus points” for voluntary or pilot project participation; (5) providing physician providers with credit under the MIPS-QPP Improvement Activities or Advancing Care Information (now called Promoting Interoperability) performance categories for participating in eCQM-related workgroups or development and/or demonstrating innovative uses of HIT; (6) establishing technology ‘challenges’ to foster innovative developments in health IT; (7) relieving reporting burden; (8) providing hospitals with incentives to recover any IT software costs; (9) excluding measures that are not applicable for CAHs or offering other reporting options for hospitals with low patient volumes; and (10) providing free software to submit the eCQMs and future required measures.

Other commenters suggested that CMS provide standards, and perhaps incentives, for health IT vendors to standardize their practices, particularly with respect to the standardized reports commonly used for quality data and internal quality review. One commenter noted that currently, providers must pay extra and wait for reports to be developed for their EHR.

A few commenters suggested that CMS provide public acknowledgement of organizations who develop or participate in innovative uses of health IT, similar to The Joint Commission’s Pioneers in Quality Award or Healthcare Information and Management Systems Society (HIMSS) Davies Award.

A number of commenters suggested that CMS allow providers to receive credit for meeting the eCQM reporting requirement in the Promoting Interoperability Programs, work with hospitals to identify areas of innovative use of health IT that align with the Meaningful Measures framework, and collaborate with federal partners to encourage health IT vendors to support hospitals in their efforts to use eCQMs and health IT to address the highest priority areas for quality measurement and improvement.

One commenter recommended that CMS reward providers and developers working on population health initiatives and require data integration with hospitals with access to adequate data, such as claims data at the patient level. Another commenter recommended that CMS reward the internal quality improvement programs and processes using health IT that already exist and are utilized by hospitals.

A few commenters suggested allowing hospitals to submit and develop quality measures that are meaningful to their patient populations, local needs, and interests, instead of focusing on measures addressing national healthcare quality priorities.

Question 9. A number of commenters responded to CMS' request for feedback on question (9) -- What additional resources or tools would hospitals and health IT vendors like to have publicly available to support testing, implementation, and reporting of eCQMs? A number of commenters provided suggestions specific to QualityNet, including: (1) decreasing wait times for reaching the QualityNet helpdesk; (2) updating QualityNet to improve user-experience; (3) increasing QualityNet's capability to receive submissions and send reports; (4) providing more immediate and detailed error messages; and (5) allowing providers to upload encrypted QRDA I files to QualityNet.

One commenter suggested that CMS grant funding to encourage measure development. Some commenters suggested that CMS could increase efficiency of measure testing by: (1) improving available testing resources; (2) developing a shared infrastructure to test eCQMs or providing a universal testing tool kit for health IT vendors; (3) providing reports that specifically identify how a hospital "failed" reporting on a measure; (4) providing immediate and detailed feedback on all errors; (5) encouraging participation in HL7 FHIR® Development Days and HL7 Connect-a-thons for testing capabilities of vendors; and (6) publicly releasing the criteria used to evaluate success or failure in reporting of eCQMs, along with releasing actual results for new measure development and testing.

Commenters' suggestions for improved guidance included: (1) providing clearer documentation; (2) offering a single source of information and resource to ask questions related to eCQM reporting; (3) clarifying abstraction questions via QualityNet; (4) providing more avenues of communication with CMS; (5) identifying which tools stakeholders should use for which purposes; (6) providing resources geared toward quality improvement to staff and clinicians; (7) providing novice-level guidance on measure development and additional opportunities for engagement with experts; (8) creating a resource to allow stakeholders to share information such as best practices and codes used; (9) adding guidance related to the use of CQL and other newer standards; (10) creating an eCQM measure specification manual similar to the manual for chart-abstracted measures; (11) providing comparisons of how eCQM specifications change

between years; and (12) identifying errors in past iterations when new eCQM measure specifications are released.

Some commenters' suggestions focused on improvements that could be made to measure development and measure specifications, including: (1) simplifying the measure development tools and measure logic; (2) using a standard approach to capturing data elements; (3) exploring natural language processing to capture discrete data elements; (4) developing a standard for EHRs to help implement eCQM reporting; (5) including thresholds and goals for all measures; (6) defining data fields using the Core Measures Data Dictionary; (7) standardizing references to measure timeframes by referencing the reporting period as well as the payment determination period when referring to measures; and (8) increasing the transparency of the eCQM calculation process by using open source evaluation codes.

Other commenters focused on how CMS could improve the submissions process, including: (1) providing workflow documents and technical release notes earlier; (2) opening the portal for eCQM data submissions earlier; and (3) implementing a system through which CMS could pull documents from hospitals using a secure direct file transfer or application.

Some commenters suggested refining the reporting requirements for eCQMs, including: (1) aligning the regulatory and reporting requirements of CMS quality programs; (2) offering flexibility to allow providers to select measures to submit from a pool of available measures in multiple forms; and (3) allowing more time to implement new and updated eCQMs.

Response: We thank all of the commenters for their feedback and suggestions. We will take them into account and consider commenters' views as we develop future policies regarding the potential future development and adoption of eCQMs generally and for future years of the Hospital IQR Program. We note that our solicitation of public comments is part of a larger effort to collect feedback on areas for improvement in the implementation of eCQMs under a variety of CMS programs. We also have been holding listening sessions with hospitals and health IT vendors about EHR and eCQM issues. We will share all these comments with the Office of the National Coordinator for Health Information Technology (ONC) and other partners.

#### 10. Accounting for Social Risk Factors in the Hospital IQR Program

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38324 through 38326), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>339</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex

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<sup>339</sup> See, for example, United States Department of Health and Human Services. "Healthy People 2020: Disparities. 2014." Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social risk factors in our value-based purchasing programs.<sup>340</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404), ASPE's report to Congress, which was required by the IMPACT Act of 2014, found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. ASPE is continuing to examine this issue in its second report required by the IMPACT Act of 2014, which is due to Congress in the fall of 2019. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38324), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>341</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that "measures with a conceptual basis for adjustment generally did not demonstrate an empirical relationship" between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has

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<sup>340</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), "Report to Congress: Social Risk Factors and Performance Under Medicare's Value-Based Purchasing Programs." December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

<sup>341</sup> Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

extended the socioeconomic status (SES) trial,<sup>342</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018 and CY 2018 proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a provider that would also allow for a comparison of those differences, or disparities, across providers. Feedback we received across our quality reporting programs included encouraging CMS: to explore other factors that could be used to stratify or risk adjust the measures (beyond dual eligibility); to consider the full range of differences in patient backgrounds that might affect outcomes; to explore risk adjustment approaches; and to offer careful consideration of what type of information display would be most useful to the public. We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care. Commenters encouraged CMS to stratify measures by other social risk factors such as age, income, and educational attainment. With regard to value-based purchasing programs, commenters also cautioned CMS to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to

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<sup>342</sup> Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

more medically complex patients. Commenters also noted that value-based purchasing program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

Specifically, in the FY 2018 IPPS/LTCH PPS proposed and final rules for the Hospital Inpatient Quality Reporting (IQR) Program, we invited and received public comment on: (1) which social risk factors provide the most valuable information to stakeholders; (2) providing hospitals with confidential feedback reports containing stratified results for certain Hospital IQR Program measures, specifically the Pneumonia Readmission measure (NQF #0506) and the Pneumonia Mortality measure (NQF #0468); (3) a potential methodology for illuminating differences in outcomes rates among patient groups within a hospital that would also allow for a comparison of those differences, or disparities, across hospitals; (4) an alternative methodology that compares performance for patient subgroups across hospitals but does not provide information on within hospital disparities and any additional suggested methodologies for calculating stratified results by patient dual eligibility status; and (5) future public reporting of these same measures stratified by patient dual eligibility status on the *Hospital Compare* website (82 FR 38407). For the Hospital IQR Program in general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care (82 FR 38404). Commenters encouraged us to stratify measures by other social risk factors such as age, income, and educational attainment (82 FR 38404).

As a next step, we are considering options to reduce health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We are considering implementing the two above-mentioned methods to promote health equity and improve healthcare quality for patients with social risk factors. The first method (the hospital-specific disparity method) would promote quality improvement by calculating differences in outcome rates among patient groups within a hospital while accounting for their clinical risk factors. This method would also allow for a comparison of those differences, or disparities, across hospitals, so hospitals could assess how well they are closing disparities gaps compared to other hospitals. The second methodological approach is complementary and would assess hospitals' outcome rates for subgroups of patients, such as dual eligible patients, across hospitals, allowing for a comparison among hospitals on their performance caring for their patients with social risk factors.

We acknowledge the complexity of interpreting stratified outcome measures. As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404 through 38409), due to this complexity, and prior to any future public reporting of stratified measure data, we plan to stratify the Pneumonia Readmission measure (NQF #0506) data by highlighting both hospital-specific disparities and readmission rates specific for dual-eligible beneficiaries across hospitals for dual-eligible patients in hospitals' confidential feedback reports beginning fall 2018. In FY 2018 IPPS/LTCH PPS final rule (82 FR 38402 through 38409), we explained that we believe the Pneumonia Readmission measure and the Pneumonia Mortality measure are appropriate first measures to stratify,

because we currently publicly report the results of both measures for a large cohort of hospitals. In addition, both measures include a large number of admissions per hospital and therefore have sufficiently large sample sizes for most hospitals to support adequate reliability of stratified calculations. As a first step, in the interest of simplicity and to minimize confusion for hospitals, we are planning to provide confidential feedback reports for the Pneumonia Readmission measure only, using both methodologies.

For the future, we are considering: (1) expanding our efforts to provide stratified data in hospital confidential feedback reports for other measures; (2) including other social risk factors beyond dual-eligible status in hospital confidential feedback reports; and (3) eventually, making stratified data publicly available on the *Hospital Compare* website, as mentioned in previous rules, to allow consumers and other stakeholders to view critical information about the care and outcomes of subgroups of patients with social risk factors. We believe the stratified results will provide hospitals with information that could illuminate disparities in care or outcome, which could subsequently be targeted through quality improvement efforts. We further believe that public display of this information could drive consumer choice and spark additional improvement efforts. A CMS contractor convened a TEP in the spring of 2018 to solicit feedback from stakeholders on approaches to consider for stratification for the Hospital IQR Program.<sup>343</sup> We anticipate receiving additional input from hospitals when they receive confidential feedback reports of the stratified results and will encourage

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<sup>343</sup> This TEP, the Hospital Outcome Measurement for Patients with Social Risk Factors, is still ongoing. TEP members will be participating in several teleconference meetings from May through September 2018. For more information on TEPs, we refer readers to: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/TEP-Current-Panels.html#0510>.

stakeholders to submit comments during this process. We are also considering how these methodologies may be adapted to apply to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for more details, where we discuss the potential stratification of certain Hospital IQR Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

Comment: Many commenters supported CMS' continued evaluation of social risk factors in quality measurement. Some commenters recommended that CMS consider both stratification and risk adjustment methodologies. A number of commenters made recommendations, including suggestions to: (1) work with measure developers to determine the most accurate way to include and account for social risk factors within each measure; (2) study social risk factors at a program level; (3) stratify social risk factors at the individual measure level because it would provide a more detailed picture of the costs and quality administered among facilities, noting that when data is publicly reported and assigned to an individual clinician, service line, or facility, it is important to be clear about who is responsible for the reported outcomes and/or performance rates through detailed attribution model specifications; and (4) risk-adjust measures for patient SES status when appropriate, but until risk-adjusted measures are available, publicly report stratified measure performance rates on the *Hospital Compare* website.

Response: We thank commenters for their feedback. Risk adjustment and stratification are two distinct ways of accounting for the importance of social risk factors on quality measures and payment programs. The goal of SES risk adjustment is to take into account the increased risk of poor outcomes for patients with social risk factors.

The Assistant Secretary for Planning and Evaluation (ASPE), as required by the IMPACT Act of 2014, studied the impact of social risk factors, including socioeconomic status, on quality and payment measures used in nine Medicare value-based purchasing programs. The report discussed several strategies to account for social risk factors in these programs.<sup>344</sup> It laid out potential merits and limitations of risk adjusting for socioeconomic status in quality measurement. Some drawbacks noted included that adjusting measures for social risks could potentially create a lower standard of care for patients with social risk factors, perpetuate disparities, and disincentivize quality improvement for these vulnerable patients. The report did not specifically express a position in favor of or against risk adjustment for SES at the patient level, but did recommend evaluating measures individually to determine if risk adjustment for socioeconomic status is warranted on a conceptual and empirical basis. Likewise, following the SES two-year trial period, the National Quality Forum (NQF) recommended evaluating the appropriateness of SES risk adjustment on a measure-by-measure basis. We note, however, that, in their final report following the conclusion of

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<sup>344</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs.” December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicares-value-based-purchasing-programs>.

the SES two-year trial period, the NQF proposed the presentation of stratified results, as we have described in this final rule, as a potential strategy for consideration.<sup>345,346</sup>

We will continue to work with measure developers to determine the most accurate way to include and account for social risk factors within each measure, including exploring stratification of social risk factors at the individual measure level. We intend to continue to study social risk factors at a program level and evaluate the effect of social risk factors on outcomes measures and quality programs. As to the commenter's request for detailed technical specifications demonstrating a measure's attribution model, such specifications are available on QualityNet for the readmission measures and include information about the attributed hospital.<sup>347</sup>

With regard to commenters' suggestion that we risk-adjust measures for patient SES status when appropriate, but until risk-adjusted measures are available, publicly report stratified measure performance rates on the *Hospital Compare* website, we note that such adjustment is not appropriate in all cases. Recent reports from ASPE, National Academies of Sciences, Engineering, and Medicine (NAM), and NQF do not specifically make recommendations in favor of or against risk adjustment for SES at the patient

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<sup>345</sup> National Quality Forum (NQF). "Evaluation of the NQF Trial Period for Risk Adjustment for Social Risk Factors." Available at:

[https://www.qualityforum.org/Publications/2017/07/Social\\_Risk\\_Trial\\_Final\\_Report.aspx](https://www.qualityforum.org/Publications/2017/07/Social_Risk_Trial_Final_Report.aspx).

<sup>346</sup> National Quality Forum (NQF). "A Roadmap for Promoting Health Equity and Eliminating Disparities: The Four I's for Health Equity." Available at:

[https://www.qualityforum.org/Publications/2017/09/A\\_Roadmap\\_for\\_Promoting\\_Health\\_Equity\\_and\\_Eliminating\\_Disparities\\_The\\_Four\\_I\\_s\\_for\\_Health\\_Equity.aspx](https://www.qualityforum.org/Publications/2017/09/A_Roadmap_for_Promoting_Health_Equity_and_Eliminating_Disparities_The_Four_I_s_for_Health_Equity.aspx).

<sup>347</sup> 2018 Condition-Specific Measures Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Readmission Measures. Available at:

<https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1219069855841>.

level.<sup>348,349,350</sup> However, they do propose to report stratified results, as we described in the FY 2019 IPPS/LTCH PPS proposed rule and this final rules as a potential strategy to consider.

We will continue to explore multiple options to account for the effect of social risk factors on quality measures and in quality programs.

Comment: Many commenters supported considering factors beyond dual eligibility when accounting for the impact of social risk factors on quality measurement. Several commenters referred CMS to recent reports by ASPE and the National Academies of Sciences, Engineering, and Medicine (NAM). Commenters identified a number of SES and SDS risk factors for consideration, including: (1) educational attainment; (2) literacy; (3) health literacy; (4) home language and English language proficiency; (5) availability of primary care and physical therapy; (6) access to medications; (7) marital status and whether one lives alone; employment status; (8) income; (9) race and ethnicity; (10) nativity; (11) payor; (12) insurance product; (13) Medicaid beneficiary status; (14) neighborhood deprivation (including the percent of households under the federal poverty level, crime rates); (15) housing insecurity; (16) distance traveled (derived from zip code); (17) availability of transportation;

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<sup>348</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Accounting for Social Risk Factors in Medicare Payment.” Jan. 2017. Available at: <http://nationalacademies.org/hmd/Reports/2017/accounting-for-social-risk-factors-in-medicare-payment-5.aspx>.

<sup>349</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs.” December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

<sup>350</sup> National Quality Forum (NQF). “Evaluation of the NQF Trial Period for Risk Adjustment for Social Risk Factors.” Available at: [https://www.qualityforum.org/Publications/2017/07/Social\\_Risk\\_Trial\\_Final\\_Report.aspx](https://www.qualityforum.org/Publications/2017/07/Social_Risk_Trial_Final_Report.aspx).

(18) access to appropriate food; and (19) access to supportive services (including availability of a caretaker).

Response: We appreciate commenters' suggestions for additional social risk factors to consider. Consistent with the findings contained in the ASPE and NAM reports, we will explore opportunities for ways to account for additional social risk factors in the future as we continue to engage with stakeholders and determine the availability and feasibility of accounting for appropriate social risk factors, including the availability of potential data sources, that might influence quality outcomes measures such as readmissions.

Comment: Many commenters supported the use of the first proposed method (hospital-specific disparity method) in stratifying measure results. One commenter asserted the data provided under the hospital-specific disparity method would be valuable in communities that have unique patient populations. Another commenter "cautiously supported" the hospital-specific disparity method, but noted it would be critical to first ensure that the methodologies work accurately and reliably, and to establish social risk categorization standards that would be used across all quality reporting programs for hospitals to decrease the reporting burden.

Several commenters supported the use of the second proposed method. One commenter requested that CMS utilize the second proposed method as soon as feasibly possible because they wanted comparison data available to drive improvement. One commenter did not support the second proposed approach because it believed patients would choose to avoid facilities that provide care to large volumes of patients with social

risk factors. The commenter noted that considering how the data would be presented on the *Hospital Compare* website would be critical in preventing this kind of bias from being introduced.

Response: We thank the commenters for their support and recommendations with respect to the two disparity measures described in the FY 2019 IPPS/LTCH PPS proposed rule.

We will continue to explore a variety of methodological approaches to ensure we produce accurate and reliable disparity results. In addition, we will work to align approaches to risk stratification across measures to minimize burden on providers. We would like to highlight that the proposed disparity measures would not place any additional burden on hospitals. The two proposed methods focus on dual eligibility as the social risk factor. We use this indicator as a proxy of low income and assets. It has the advantage of being readily available in claims data and therefore does not impose any additional data collection burden.

As to the commenter's concern that the second disparity method might lead patients to avoid hospitals with a large proportion of patients with social risk factors, we note that the goal of the second method (the group-specific outcome rate method) is not to provide patients with information on hospitals' volume of patients with social risk factors, but rather to provide specific outcome rates for patients with social risk factors at the individual hospital level (for example readmission rates for dual eligible patients). Preliminary results have shown that both hospitals caring for a low and a high proportion of patients with social risk factors can perform well or poorly on this measure.

We will also continue to evaluate what may be the best method or methods of publicly displaying stratified outcome measures and disparity information to ensure the public's understanding of the data.

Comment: Many commenters expressly supported CMS' plans to provide stratified Pneumonia Readmissions measure data in confidential, hospital-specific feedback reports because it would allow hospitals adequate time to understand their performance on stratified measures, evaluate the accuracy and impact of the stratification, identify any issues around disparity in the care provided, and inform internal quality improvement efforts. A few commenters requested that CMS allow hospitals sufficient time to review and analyze stratified rates prior to any public reporting, with one commenter requesting receipt of at least two years of confidential feedback reports prior to any public reporting. Commenters also requested that CMS ensure that hospitals have sufficient information to interpret the stratified measures results by providing national and regional benchmarks for the stratifications and detailed specifications of how measures are stratified so that hospitals can replicate this information during their ongoing performance monitoring. A number of commenters suggested that CMS solicit additional feedback from stakeholders before publicly reporting stratified quality data to ensure that data would be reported in a manner that is accurate, reliable, and understandable to patients. A few commenters requested that CMS propose specific measures for stratification through rulemaking.

Response: We thank commenters for their feedback and will take it into consideration. As described in the preamble of this final rule, we are planning to provide

confidential reports to hospitals for the Pneumonia Readmission measure (NQF #0506), stratified by patient dual-eligible status. The confidential hospital-specific reports will be provided for hospitals to preview from August 24 through September 24, 2018. During this confidential preview period, we will also provide educational materials to ensure hospitals have sufficient information to understand and interpret their disparity results. Hospital specific reports will include national and regional benchmarks for the two disparity methods. Finally, a technical report will provide detailed specifications on the two disparity methods.

We agree with commenters that the confidential reporting period will allow hospitals to understand the stratified measure data prior to any future public reporting. We acknowledge commenters' concerns about having sufficient time to review and analyze stratified measure data prior to any public reporting on that data. We have not yet determined any future plans with respect to publicly reporting stratified data, and intend to continue to engage with hospitals and relevant stakeholders about their experiences with and recommendations for the stratification of measure data and to ensure the reliability of such data before proposing to publicly display stratified measure data in the future. Any proposal to display stratified quality measure data on the *Hospital Compare* website would be made through future rulemaking.

Comment: A few commenters recommended that CMS consider or incorporate the findings or recommendations from the reports from the APSE, NAM, and a TEP that the NQF convened, per HHS/CMS request. A few commenters suggested that CMS begin incorporating other social risk factors found to be important while also continuing

to monitor, study, and refine these efforts over time. Other commenters encouraged the empirical testing and use of neighborhood-level adjustment (that is, integrating patient data with information about contextual factors that influence health outcomes at the community or population level) where the data are available, in order to assess the impact of these adjustments on local provider performance metrics. The commenters noted that based on the results of these tests, CMS and other agencies would be able to prioritize the national collection of data that are most essential for valid risk adjustment methodologies.

A few commenters recommended that CMS work with vendors to collect SES and SDS variables through their EHRs, potentially through the implementation of demonstration projects. The commenters noted that the collected data elements could be used to supplement the claims data already captured by CMS to greatly improve the measure's risk adjustment methodology.

A number of commenters requested that CMS be more transparent during efforts to address social risk factors and to continuously seek stakeholder input, including measure stewards, in order to achieve the goals of attaining health equity for all beneficiaries while also minimizing unintended consequences, as well as to ensure the adjustment approach keeps up with the evolving measurement science around accounting for social risk factors. One commenter requested that CMS provide a work plan and timeline, as well as increase opportunities for collaboration with Medicare Advantage and Medicaid health plans.

Response: We thank commenters for their recommendations. Our work to date on measure stratification and risk-adjustment has been informed by the reports by ASPE,

NAM, and the NQF, as recommended by the commenters, as well as feedback directly received from stakeholders such as through the rulemaking public comment process. This includes closely tracking recommendations about social risk factor variables for use and potential methodologies. We are committed to continuing to expand the range of social risk factors incorporated into measure stratification based on the recommendations of the above groups. Consistent with the findings of the ASPE and NAM reports, we will explore accounting for such factors in the future as we continue to engage stakeholders and determine the availability of appropriate community factors that might influence quality outcome measures such as readmission. We will also consider the use of social risk factors obtained through EHRs while balancing concerns about undue data collection and reporting burden on providers.

We also thank commenters for their support on our approach to engaging stakeholders in our stratification methodology development process. As noted, a TEP was convened to receive feedback on the two methods we developed to illuminate disparities. The TEP members came from diverse perspectives and backgrounds, including clinicians, hospitals, purchasers, consumers, and experts in quality improvement and health care disparities. CMS contractors also regularly consulted with an advisory working group of five patients, family caregivers, and consumer advocates. The working group meetings addressed key issues surrounding the development of the two disparity methods, including the conceptual goal of the methods, their complementarity, and how best to report results for the disparity methods. We also held a webinar to inform hospital and consumer organizations about the two disparity methods

and the confidential preview period taking place for the Pneumonia Readmission measure and dual eligibility. We will continue to explore multiple options and will elicit further feedback from stakeholders before determining an approach for public reporting.

Comment: A few commenters did not support the inclusion and modification of risk factors related to socioeconomic status for determining provider reimbursement for Medicare services in all the IPPS programs. One commenter expressed concerns that this approach would not address the underlying disparities that are often associated with poor health outcomes by masking potential disparities or minimizing incentives to improve the outcomes for disadvantaged populations. Specifically, the commenter asserted this approach would create perverse incentives for poor performers to continue with the status quo and for high performers to retreat from their efforts to address disparities in high socioeconomic status populations. Another commenter expressed reservations about adjusting hospitals' performance rates using social factors because it would obscure disparities. Specifically, the commenter disagreed with using the risk-adjustment model because it excludes some important clinical risk factors that cannot be obtained through administrative data, which could have an impact on stratified comparison of disparities if the missing risk factors have different incidence rates across the subgroups. One commenter did not support the use of stratification to account for social risk factors in inpatient quality programs, and recommended the use of risk-adjustment methodology instead, particularly for financial incentive programs.

Response: We thank the commenters for their feedback and appreciate their concerns. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38324 through 38326) and

in this final rule, we affirm our commitment to improving beneficiary outcomes, reducing health disparities, and our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive high quality care. In addition, we seek to ensure that the quality of care furnished by providers and suppliers is assessed as fairly as possible under our programs while ensuring that beneficiaries have adequate access to excellent care. Our efforts, to date, have been undertaken in response to the feedback we have received from stakeholders and based on the findings contained in reports by ASPE, NAM and NQF. These efforts include closely tracking recommendations about social risk factors variables for use and potential methodologies. We continue to believe that it is important to consider options to address equity and disparity in our quality programs, which is why we will continue working with the public and key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

Comment: One commenter, who generally did not support stratification, expressed concern that many hospital quality measures, such as hospital-acquired infection measures, would have limited sample sizes at the individual hospital level, and that this could ultimately limit the statistical reliability of reporting quality measures by race or other sociodemographic characteristics. The commenter also expressed its belief that the quality of race and ethnicity data within the Medicare program is known to be suboptimal for many races outside of white and black, including American Indian/Alaska Native and other races, and recommended that CMS develop a proposal to improve the

collection of race and ethnicity data, or propose how to promote public transparency using data that are of mixed quality, before reporting such data publicly.

Response: We thank the commenter for the feedback. We agree with the commenter's concerns about the impact of small samples sizes on the reliability of stratified quality measure results. Furthermore, small sample sizes may be especially challenging for measure stratification because some hospitals may have few patients with social risk factors. Therefore, under the first method (the hospital-specific disparity method), disparities would be reported only for hospitals with at least 25 patients and 10 patients for each sub-group. The second method (the group-specific outcome rate method) would use a cut-off of at least 25 patients for potential public reporting. We note the overall sample size of 25 patients is consistent with the quality outcome measures currently implemented.

We agree with the commenter's concern that race and ethnicity data for Medicare beneficiaries are currently not consistently captured in claims. We believe that examining racial and ethnic disparities in outcomes within hospitals is important since race and ethnicity have been shown to be associated with health care quality, and will continue to examine how best to improve the collection of such data.

We thank the commenters for their views and will take them into consideration as we continue our work on these issues.

## 11. Form, Manner, and Timing of Quality Data Submission

### a. Background

Sections 1886(b)(3)(B)(viii)(I) and (b)(3)(B)(viii)(II) of the Act state that the applicable percentage increase for FY 2015 and each subsequent year shall be reduced by one-quarter of such applicable percentage increase (determined without regard to sections 1886(b)(3)(B)(ix), (xi), or (xii) of the Act) for any subsection (d) hospital that does not submit data required to be submitted on measures specified by the Secretary in a form and manner, and at a time, specified by the Secretary. Previously, the applicable percentage increase for FY 2007 and each subsequent fiscal year until FY 2015 was reduced by 2.0 percentage points for subsection (d) hospitals failing to submit data in accordance with the description above. In accordance with the statute, the FY 2019 payment determination will begin the fifth year that the Hospital IQR Program will reduce the applicable percentage increase by one-quarter of such applicable percentage increase.

In order to participate in the Hospital IQR Program, hospitals must meet specific procedural, data collection, submission, and validation requirements. For each Hospital IQR Program payment determination, we require that hospitals submit data on each specified measure in accordance with the measure's specifications for a particular period of time. The data submission requirements, Specifications Manual, and submission deadlines are posted on the QualityNet website at: <http://www.QualityNet.org/>. The annual update of electronic clinical quality measure (eCQM) specifications and implementation guidance documents are available on the Electronic Clinical Quality

Improvement (eCQI) Resource Center website at: <https://ecqi.healthit.gov/>. Hospitals must register and submit quality data through the secure portion of the QualityNet website. There are safeguards in place in accordance with the HIPAA Security Rule to protect patient information submitted through this website.

b. Procedural Requirements

The Hospital IQR Program's procedural requirements are codified in regulation at 42 CFR 412.140. We refer readers to these codified regulations for participation requirements, as further explained by the FY 2014 IPPS/LTCH PPS final rule (78 FR 50810 through 50811) and the FY 2017 IPPS/LTCH PPS final rule (81 FR 57168). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20496 through 20497), we did not propose any changes to these procedural requirements.

c. Data Submission Requirements for Chart-Abstracted Measures

We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51640 through 51641), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53536 through 53537), and the FY 2014 IPPS/LTCH PPS final rule (78 FR 50811) for details on the Hospital IQR Program data submission requirements for chart-abstracted measures. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20497), we did not propose any changes to the data submission requirements for chart-abstracted measures.

d. Reporting and Submission Requirements for eCQMs

For a discussion of our previously finalized eCQMs and policies, we refer readers to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50807 through 50810; 50811 through 50819), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50241 through 50253; 50256

through 50259; and 50273 through 50276), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49692 through 49698; and 49704 through 49709), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57150 through 57161; and 57169 through 57172), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38355 through 38361; 38386 through 38394; 38474 through 38485; and 38487 through 38493).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20497 through 20498), we clarified measure logic used in eCQM development; proposed to extend previously established eCQM reporting and submission requirements for the CY 2019 reporting period/FY 2021 payment determination; and proposed to require hospitals to use the 2015 Edition certification criteria for CEHRT beginning with the CY 2019 reporting period/FY 2021 payment determination. These matters are discussed in detail below.

(1) Clarification of the Measure Logic Used in eCQM Development - Transition to Clinical Quality Language (CQL)

Although the measure logic, which represents the lines of logic that comprise a single AND/OR statement composing each population, used in eCQM development is not generally specified through notice and comment rulemaking, in the proposed rule (83 FR 20497), we notified the public that all eCQM specifications published in CY 2018 for the CY 2019 reporting period/FY 2021 payment determination and subsequent years (beginning with the Annual Update that was published in May 2018 and for implementation in CY 2019) will use the Clinical Quality Language (CQL). CQL is a

Health Level Seven (HL7) International standard<sup>351</sup> and aims to unify the expression of logic for eCQMs and Clinical Decision Support (CDS).<sup>352</sup> CQL provides the ability to better express logic defining measure populations to improve the accuracy and clarity of eCQMs. In addition, CQL is a high-level authoring language that is intended to be human-readable and allows measure developers to express data criteria and represent it in a manner suitable for language processing.

Prior to CY 2017, eCQM logic was defined by “Quality Data Model (QDM) Logic,” an information model that defines relationships between patients and clinical concepts in a standardized format to enable electronic quality performance measurement.<sup>353</sup> We believe that compared to CQL, QDM logic is more complex and difficult to compute. QDM logic limits a measure developer’s ability to express the type of comparisons needed to truly evaluate outcomes of care because QDM logic cannot request patient results that indicate outcomes and assess improvement over time; in contrast, CQL’s mathematical expression logic allows this type of comparison over time and is independent of the model.<sup>354</sup> Moreover, CQL: (1) offers improved expressivity; (2) is more precise/unambiguous; (3) can share logic between measures; (4) allows for measure logic to be shared with CDS tools; (5) can be used with multiple information

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<sup>351</sup> Additional details about HL7 are available at: <http://www.hl7.org/about/index.cfm?ref=nav>. In addition, readers may learn more under “Where can I find more information on CQL” on the eCQI Resource Center website at: <https://ecqi.healthit.gov/cql>.

<sup>352</sup> Additional details about CDS is available on the eCQI Resource Center website at: <https://ecqi.healthit.gov/cds>.

<sup>353</sup> Additional details about QDM Logic are available at: <https://ecqi.healthit.gov/qdm>.

<sup>354</sup> Additional details about How CQL Logic is Different from QDM Logic are available at: <https://ecqi.healthit.gov/qdm/qdm-Qs%26As#QualityDataModelQDMforusewithClinicalQualityLanguageCQL>.

data models (for example, QDM, Fast Healthcare Interoperability Resources (FHIR)<sup>355</sup>); and (6) simplifies calculation engine implementation.<sup>356</sup> CQL replaces the logic expressions defined in the QDM, and QDM (beginning with v5.3<sup>357</sup>) includes only the conceptual model for defining the data elements.

Measure developers successfully tested CQL for expressing eQMs from 2016 through 2017.<sup>358</sup> Based on the results, the Measure Authoring Tool (MAT)<sup>359</sup> and the Bonnie<sup>360</sup> tool have been updated to use CQL. We believe replacing the measure logic used in eQDM development from QDM to CQL will enable measure developers to engineer more precise, more interoperable measures that interface with CDS tools, which in turn, will result in availability of better measures of patient outcomes for use in the Hospital IQR Program and other CMS programs. We note that utilization of CQL for the eQMs currently available for reporting in the Hospital IQR Program measure set would not affect the intent of the measure, the numerator, denominator, or any measure exclusions or exceptions.

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<sup>355</sup> FHIR, developed by Health Level Seven International (HL7), is designed to enable information exchange to support the provision of healthcare in a wide variety of settings. The specification builds on and adapts modern, widely used RESTful practices to enable the provision of integrated healthcare across a wide range of teams and organizations. Additional information available at: <http://hl7.org/fhir/overview-dev.html>.

<sup>356</sup> Additional details on the benefits of Clinical Quality Language (CQL) are available at: [https://ecqi.healthit.gov/system/files/Benefits\\_of\\_CQL\\_May2017-508.pdf](https://ecqi.healthit.gov/system/files/Benefits_of_CQL_May2017-508.pdf).

<sup>357</sup> Additional details about QDM v5.3 available at: <https://ecqi.healthit.gov/qdm/qdm-news-0/now-available-quality-data-model-qdm-v53>.

<sup>358</sup> Additional details about the Timeline for the Transition to CQL are available at: <https://ecqi.healthit.gov/cql>.

<sup>359</sup> The Measure Authoring Tool (MAT) is a web-based tool that allows measure developers to author electronic Clinical Quality Measures (eQMs). Using the tool, authors create Clinical Quality Language (CQL) expressions, which have the conceptual portion of the Quality Data Model (QDM) as their foundation (<https://www.emasuretool.cms.gov/>).

<sup>360</sup> Bonnie is a tool for testing electronic clinical quality measures (eQMs) designed to support streamlined and efficient pre-testing of eQMs, particularly those used in the CMS quality programs (<https://bonnie.healthit.gov/>).

For additional information about the CQL transition and its impact on eCQM development, we refer readers to the eCQI Resource Center website at:

<https://ecqi.healthit.gov/cql>.

Comment: Several commenters expressed support for the transition to CQL measure logic because it will provide improved specificity, precision, clarity, usability, and value to eCQMs to better align with the clinical intent of the measures. One commenter noted that CQL will provide earlier, longer draft periods that could enable hospitals and vendors to perform more testing and provide more feedback. Another commenter specifically suggested use of Health Level 7 (HL7) Fast Healthcare Interoperability Resources (FHIR) as part of CQL.

Response: We thank commenters for their support. We will consider use of HL7 FHIR as part of CQL in the future.

Comment: A few commenters recommended monitoring the transition to the CQL measure logic.

Response: We will continue to monitor the experiences of hospitals and vendors as they transition to CQL to proactively address any challenges that might arise.

Comment: A few commenters acknowledged the benefits of CQL but expressed concern that the transition to CQL for the CY 2019 reporting period did not provide enough time to implement the complex changes necessary without increasing burden. One commenter suggested a 24 month delay in requiring implementation.

Response: We agree with the commenter that CQL has many benefits including improved expressivity, precision, and interoperability to facilitate sharing logic between

measures and with CDS tools. While we try to be as proactive as possible in providing lead time changes to the Hospital IQR Program, we believe that the CY 2019 reporting period is the appropriate time to transition to CQL because we believe these benefits should be actualized as soon as practicable. We will continue working to provide hospitals with the education, tools, and resources necessary to help seamlessly implement necessary changes while minimizing increase in burden. Further, we will also consider the issues associated with new software, workflow changes, training, et cetera as we continue to improve our education and outreach efforts.

(2) Reporting and Submission Requirements for eCQMs for the CY 2019 Reporting Period/FY 2021 Payment Determination

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38361), we finalized eCQM reporting and submission requirements such that hospitals are required to report only one, self-selected calendar quarter of data for four self-selected eCQMs for the CY 2018 reporting period/FY 2020 payment determination. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20498), in alignment with the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs), we proposed to extend the same eCQM reporting and submission requirements, such that hospitals would be required to report one, self-selected calendar quarter of data for four self-selected eCQMs for the CY 2019 reporting period/FY 2021 payment determination. We believe continuing the same eCQM reporting and submission requirements is appropriate because doing so continues to offer hospitals reporting flexibility and does not increase the information collection burden on data

submitters, allowing them to shift resources to support system upgrades, data mapping, and staff training related to eCQM documentation and reporting. We also refer readers to section VIII.D.9. of the preamble of this final rule where similar proposals are discussed for the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs).

Comment: Many commenters supported the proposed eCQM reporting requirements for the CY 2019 reporting period/FY 2021 payment determination, such that hospitals would be required to select and submit one calendar quarter of data for 4 of the available eCQMs. Several comments expressed appreciation for the continued flexibility and consistency CMS has provided for eCQM reporting requirements, acknowledging the operational challenges in implementing eCQM reporting. These commenters noted that maintaining the reporting requirements will make the transition to 2015 Edition CEHRT more seamless, because the upgrade process will make it even more difficult for hospitals to electronically report eCQMs for more than one calendar quarter, especially if they are not able to complete the upgrade to the new CEHRT until the end of the year. One commenter also noted that allowing hospitals to self-select one quarter of data allows for adjustments to assure that the data on which CMS relies for long-term decision-making is accurate.

Response: We thank the commenters for their support.

Comment: Some commenters suggested the proposed eCQM reporting requirements for the CY 2019 reporting period/FY 2021 payment determination should

also be finalized for the CY 2020 reporting/FY 2022 payment determination, consistent with the Promoting Interoperability Program proposal.

Response: With respect to extending these reporting requirements for the CY 2020 reporting/FY 2022 payment determination, we will continue to monitor and assess the progress of hospitals implementing eCQM requirements and engage in discussions with hospitals regarding their experiences as we consider policies related to eCQM reporting in future rulemaking. We are committed to staying in alignment with the Promoting Interoperability Program's eCQM-related policies to the greatest extent feasible, and we believe the commenter may have misinterpreted the Promoting Interoperability Program's proposal with regard to eCQM reporting requirements. In alignment with the Hospital IQR Program, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20539), the Promoting Interoperability Program proposed, "[f]or CY 2019, for eligible hospitals and CAHs that report CQMs electronically, we are proposing the reporting period for the Medicare and Medicaid Promoting Interoperability Programs would be one, self-selected calendar quarter of CY 2019 data." Neither the Promoting Interoperability Program, nor the Hospital IQR Program, proposed eCQM reporting requirements for the CY 2020 reporting/FY 2022 payment determination in the FY 2019 IPPS/LTCH PPS proposed rule. We note that the Promoting Interoperability Program had additional proposals related to requirements for attesting to measures and objectives, which may have different requirements and different reporting periods than for reporting CQMs electronically and we refer readers to section VIII.D. of the preamble of this final rule for more information.

Comment: One commenter suggested that eCQMs should be implemented at a faster rate and that the commenter would prefer to report all chart-abstracted measures in an eCQM version because eCQMs are resulting in significant cost-reductions associated with not having to chart-abstract.

Response: We thank the commenter for their suggestion. It is one of our goals to expand EHR-based quality reporting in the Hospital IQR Program using more meaningful measures, which we believe will ultimately reduce burden on hospitals as compared with chart-abstracted data reporting and improve patient outcomes by providing more robust data to support quality improvement efforts. We intend to introduce additional eCQMs into the program as eCQMs that support our program goals become available, but we want to ensure that we proceed slowly and incrementally to enable hospitals enough time to update systems and workflows in the least burdensome manner possible.

Comment: A few commenters did not support the proposed eCQM reporting requirements for the CY 2019 reporting period/FY 2021 payment determination, such that hospitals would be required to select and submit one calendar quarter of data for 4 of the available eCQMs. Specifically, one commenter recommended that: (1) CMS decrease the number of eCQMs required to be reported to CMS in 2018; and (2) CMS identify one or two specific eCQMs on which it would like all hospitals to report rather than for measures to be removed in subsequent reporting years.

Response: We thank the commenters for their views and suggestions but we believe continuing the same eCQM reporting and submission requirements is appropriate

because doing so continues to offer hospitals reporting flexibility and does not increase the information collection burden on data submitters, allowing them to shift resources to support system upgrades, data mapping, and staff training related to eCQM documentation and reporting. Specifically, we do not believe decreasing the number of eCQMs required to be reported is necessary because for the CY 2017 reporting period and the CY 2018 reporting period, over 90 percent of IPPS hospitals successfully reported one quarter of data for 4 eCQMs. As to the suggestion to identify one or two specific eCQMs on which all hospitals would be required to report instead of removing measures for future program years, at this time we believe it is a greater priority to offer flexibility to hospitals in selecting eCQMs that are most relevant to their individual patient populations and quality improvement efforts as they upgrade EHR systems, map data elements, and modify workflows to improve EHR-based quality reporting. We will take this suggestion into consideration and continue to monitor and assess the progress of hospitals implementing eCQM reporting requirements, as well as whether there is a continued need to remove any other eCQMs from the measure set. We will also continue to engage in discussions with hospitals and health IT vendors regarding their experiences as we consider policies related to eCQM reporting in future rulemaking.

Comment: One commenter suggested aligning all Hospital IQR and Promoting Interoperability Program requirements, including requiring one consecutive 90-day reporting period, to eliminate confusion among health care providers.

Response: While we try to align eCQM reporting requirements for the Hospital IQR and Promoting Interoperability Programs to the greatest extent feasible (we refer

readers to section VIII.D.9. of the preamble of this final rule where we are finalizing the same eCQM reporting requirements in the Hospital IQR Program as the Promoting Interoperability Programs for the CY 2019 reporting period/FY 2021 payment determination), we are not able to align the Hospital IQR Program with the Promoting Interoperability Program's requirements for attesting to measures and objectives, which allow for one consecutive 90-day reporting period. We note that the Hospital IQR Program can only use quality and cost measures and does not allow for an attestation option.

Comment: One commenter expressed concern that the transition to CQL and the proposed removal of the seven eCQMs would result in considerable burden required to map the necessary data elements from the EHR for 4 eCQMs and some vendors are not properly equipped to collect and transmit such data through the CMS QualityNet secure portal.

Response: We appreciate the commenter's concern that the transition to CQL and removal of the seven eCQMs may result in additional burden required to map the necessary data elements from the EHR for 4 eCQMs, however, hospitals have been successfully reporting one calendar quarter of data for 4 eCQMs and we believe that reporting will become progressively easier with every year of experience, and maintaining these requirements provides continuity, minimizing provider confusion about changing requirements.

After consideration of the public comments we received, we are finalizing our proposal to extend the eCQM reporting and submission requirements previously finalized

for the CY 2018 reporting period/FY 2020 payment determination, such that hospitals would be required to report one, self-selected calendar quarter of data for four self-selected eCQMs for the CY 2019 reporting period/FY 2021 payment determination as proposed. We also refer readers to section VIII.D.9. of the preamble of this final rule where we are finalizing similar policy under the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs).

(3) Changes to the Certification Requirements for eCQM Reporting Beginning with the CY 2019 Reporting Period/FY 2021 Payment Determination

In the FY 2018 IPPS/LTCH PPS final rule, we finalized a policy to allow flexibility for hospitals to use the 2014 Edition certification criteria, the 2015 Edition certification criteria, or a combination of both for the CY 2018 reporting period/FY 2020 payment determination only (82 FR 38388). This was a change to the policy previously finalized in the FY 2017 IPPS/LTCH PPS final rule that required hospitals to use the 2015 Edition certification criteria for CEHRT for the CY 2018 reporting period/FY 2020 payment determination and subsequent years (81 FR 57171).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20498), to align with the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs), for the Hospital IQR Program we proposed to require hospitals to use only the 2015 Edition certification criteria for CEHRT beginning with the CY 2019 reporting period/FY 2021 payment determination. We refer readers to section VIII.D.3. of the preamble of this final rule in which the

Medicare and Medicaid Promoting Interoperability Programs discuss more broadly the reasons for and benefits of requiring hospitals to use the 2015 Edition certification criteria for CEHRT, beginning with the CY 2019 reporting period/FY 2021 payment determination. There are certain functionalities in the 2015 Edition of certified electronic health record technology that were not available in the 2014 Edition that we believe will increase interoperability and the flow of information between providers and patients.

In addition, as we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38387 through 38388), specifically as to eCQM reporting, the 2015 Edition includes updates to standards for structured data capture as well as data elements in the common clinical data set which can be captured in a structured format. We continue to believe the use of relevant, up-to-date, standards-based structured data capture with an EHR certified to the 2015 Edition supports electronic clinical quality measurement.

The 2015 Edition certification criteria (that make up CEHRT) within the certification testing process includes features that are designed to improve the functionality and quality of eCQM data.<sup>361</sup> Specifically, systems must demonstrate they can import and allow a user to export one or more QRDA files. This allows systems to share files and extract data for reporting into another system or send to another system. In addition, testing coverage is much more robust; all measures have >80 percent of test pathways tested in the test bundle with most >95 percent. In addition, the 2015 Edition includes a revised requirement that products must be able to export data from one patient,

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<sup>361</sup> For CEHRT definition, we refer readers to 42 CFR 495.4. For additional details about the updates to the 2015 Edition, we refer readers to ONC's Common Clinical Data Set resource, available at: [https://www.healthit.gov/sites/default/files/commonclinicaldataset\\_ml\\_11-4-15.pdf](https://www.healthit.gov/sites/default/files/commonclinicaldataset_ml_11-4-15.pdf).

a set of patients, or a subset of patients, which is responsive to health care provider feedback that their data is unable to carry over from a previous EHR. The 2014 Edition did not include a requirement that the vendor allow the provider to export the data themselves. In the 2015 Edition, the provider has the autonomy to export data themselves without intervention by their vendor, resulting in increased interoperability and data exchange between the two Editions. This includes a new function that supports increased patient access to their health information through email transmission. The increased interoperability in this requirement provides patients more control of their health data to inform the decisions that they make regarding their health.

The 2015 Edition certification criteria for CEHRT also includes optional certification criteria and program specific testing which can also support electronic clinical quality reporting. The filter criteria ensure a product can filter an electronic file based on demographics like sex or race, based on provider or site characteristics like TIN/NPI, and based on a diagnosis or problem. The testing for this function checks that patients are appropriately aggregated and calculated for this new function which supports flexibility, specificity, and more robust analysis of eCQM data. Finally, the 2015 Edition provides optional testing to CMS requirements for reporting, such as form and manner specifications and implementation guides. For these reasons, in the proposed rule, we proposed to require hospitals to use the 2015 Edition certification criteria for CEHRT when reporting eCQMs beginning with the CY 2019 reporting period/FY 2021 payment determination.

We note that the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) previously finalized the requirement that hospitals use the 2015 Edition certification criteria for CEHRT beginning with the CY 2019 reporting period/FY 2021 payment determination (80 FR 62873 through 62875), such that hospitals participating in both the Hospital IQR Program and the Medicare and Medicaid Promoting Interoperability Programs already would be required to use the 2015 Edition certification criteria for CEHRT beginning with the CY 2019 reporting period/FY 2021 payment determination.

Comment: Many commenters supported the required use of 2015 Edition of CEHRT because it use enhances interoperability, increases implementation efficiency, shortens product development time, eases provider system integration, addresses health disparities by providing more robust demographic data collection on social determinants of health, includes application programming interfaces (APIs) for consumer access, and promotes a new streamlined approach to privacy and security. For these reasons, commenters believed the benefits outweigh any upgrade costs. Commenters noted that requiring the 2015 Edition CEHRT will help to simplify the Promoting Interoperability Program and eliminate confusion around different objective and measure sets available for reporting. In addition, commenters asserted the 2015 Edition CEHRT will provide patients more control of their health data to inform the decisions that they make regarding their health, helping patients participate as full partners in their care.

Several commenters also believed that a majority of health IT vendors have successfully completed, or are in the process of completing, their certification(s) under

the 2015 Edition CEHRT Criteria, and it would significantly and unfairly penalize the diligence of these parties by any delay in order to accommodate those companies who have not complied with the 2015 Edition CEHRT criteria by now.

Response: We thank commenters for their support.

Comment: One commenter urged that, as soon as possible, CMS and ONC ensure that the U.S. Core Data for Interoperability (USCDI) captures more of the patient's full health care record at any given facility, which can then be linked to application programming interfaces (APIs) such as FHIR, enabling even greater functionality of EHRs.

Response: We thank the commenter for the suggestion, and we will consult with ONC regarding interoperability and linking EHRs to APIs, or operating system tools used by developers of software applications. As discussed in section VIII.A.11.d.(1) above, FHIR, or Fast Healthcare Interoperability Resources, is a standards framework developed by Health Level Seven International (HL7) and is designed to enable information exchange to support the provision of healthcare in a wide variety of settings.<sup>362</sup> We will continue to explore this and other opportunities to improve functionality for future years of the Hospital IQR Program.

Comment: A few commenters supported the required use of the 2015 Edition of CEHRT, but recommended CMS delay the requirement until the CY 2020 reporting period/FY 2022 payment determination or allow flexibility for 6 months to a year for

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<sup>362</sup> FHIR, developed by Health Level Seven International (HL7), is designed to enable information exchange to support the provision of healthcare in a wide variety of settings. The specification builds on and adapts modern, widely used RESTful practices to enable the provision of integrated healthcare across a wide range of teams and organizations. Additional information available at: <http://hl7.org/fhir/overview-dev.html>.

implementation. Although most commenters did not anticipate significant labor would be required from providers to implement the new functionalities required, some commenters recommended that CMS grant Extraordinary Circumstances Exceptions (ECEs) to hospitals that are unable to migrate to the 2015 Edition due to vendor backlogs in updating their technology.

Response: We note that, as described above, in both the Hospital IQR and Promoting Interoperability Programs, we have previously delayed requiring the use of the 2015 Edition CEHRT, and do not believe that transition to the 2015 Edition certification criteria for CEHRT for the CY 2019 reporting period will materially impact the percentage of hospitals able to successfully report eCQM data, particularly in light of our change to previously finalized policy to allow flexibility for hospitals to use the 2014 Edition, 2015 Edition, or a combination of both for the CY 2018 reporting period/FY 2020 payment determination. Consistent with the observations of several commenters, we believe a majority of health IT vendors have successfully completed, or are in the process of completing, their certification(s) under the 2015 Criteria, and that the CY 2019 reporting period/FY 2021 payment determination is the appropriate time to require the transition to the 2015 Edition.

With regard to commenters' suggestion that hospitals unable to migrate to the 2015 Edition due to health IT vendor backlogs in updating their technology be granted an Extraordinary Circumstances Exception (ECE), we note that if a hospital finds it is unable to meet the eCQM submission deadline or other submission requirements, the hospital should review our criteria for an eCQM-related ECE (81 FR 57182) and consider

submitting an ECE request by the ECE request deadline. Our current policy allows hospitals to utilize the existing ECE form to request an exception from the Hospital IQR Program's eCQM reporting requirement for the applicable program year based on hardships preventing hospitals from electronically reporting (81 FR 57182). Such hardships could include, but are not limited to, infrastructure challenges (hospitals must demonstrate that they are in an area without sufficient internet access or face insurmountable barriers to obtaining infrastructure) or unforeseen circumstances, such as vendor issues outside of the hospital's control (including a vendor product losing certification) (80 FR 49695 and 49713). ECE requests for the Hospital IQR Program are considered on a case-by-case basis (81 FR 57182). We will assess the hospital's request on a case-by-case basis to determine if an exception is merited. Therefore, our decision whether or not to grant an ECE will be based on the specific circumstances of the hospital. For additional information about eCQM-related ECE requests, we refer readers to the QualityNet website at:

<https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228775554109>.

Comment: Although commenters acknowledged the 2015 Edition of CEHRT includes important updates to facilitate the exchange of data, many commenters did not support the required use of 2015 Edition of CEHRT because of the costs to hospitals and encouraged CMS to continue to allow hospitals to use the 2014 Edition of CEHRT. In particular, several commenters expressed concern about the ability of rural and solo/small group providers to upgrade EHR systems because they struggle to ensure products are

triaged, fully tested, and implemented, with staff trained and workflow adjustments validated to ensure safe, effective, and efficient implementation and use. Some commenters suggested flexible approaches that allow clinicians to incorporate technology into their unique clinical workflows, to mitigate data access and functionality issues that might be unique to their practice, and to use EHRs in a manner that more directly responds to their patients' needs and aligns with their clinical workflow. One commenter noted a recent search of the Certified Health IT Product List shows that there are 338 products currently certified to the 2015 Edition. Of these, most are limited modules for providers and specialties or are limited to specific functionalities, such as a patient portal. The commenter noted, in comparison, there are more than 2,400 EHR products still certified to the 2014 Edition.

Response: Although we acknowledge that facilitating quality improvement for rural and small hospitals present unique challenges and is a high priority under the Meaningful Measures Initiative, we believe the increased interoperability and the flow of information between providers and patients resulting from use of the 2015 Edition justifies the costs of implementation. As stated above, there are certain functionalities in the 2015 Edition that were not available in the 2014 Edition, including features that are designed to improve the functionality and quality of eCQM data. As we discussed in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38387 through 38388), specifically as to eCQM reporting, the 2015 Edition includes updates to standards for structured data capture as well as data elements in the common clinical data set which can be captured in a structured format. We continue to believe the use of relevant, up-to-date,

standards-based structured data capture with an EHR certified to the 2015 Edition supports electronic clinical quality measurement.

With respect to the commenter's observation that the number of products currently certified to the 2015 Edition are limited as compared to the number of products available certified to the 2014 Edition, we expect that as more hospitals begin to use the 2015 Edition, the number of products included in the Certified Health IT Product List<sup>363</sup> will quickly multiply. We believe our policy to require use of the 2015 Edition for the CY 2019 reporting period/FY 2021 payment determination is likely to expedite the development of these products.

Comment: One commenter requested CMS update a hyperlink in the proposed rule at 83 FR 20498, footnote 330.

Response: We have updated the hyperlink in the footnote above. We also corrected several other hyperlinks in the proposed rule in a correction notice published in the **Federal Register** (83 FR 28603 through 28604).

Comment: Several commenters requested clarification about whether hospitals are required to use 2015 Edition CEHRT for the full calendar year, or for a 90-day reporting period. A few commenters suggested CMS make the reporting period for all programs that require the use of 2015 Edition CEHRT be 90 days for the CY 2019 reporting period, noting that some CMS programs still require the use of 2015 Edition CEHRT for an entire year. One commenter asked CMS to clarify the date on which this

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<sup>363</sup> The Certified Health IT Product List is a listing of health IT products, tested and reviewed by the Office of the National Coordinator for Health IT. We refer readers to: <https://chpl.healthit.gov/>.

must be certified and recommended that date correspond with the beginning of the chosen reporting period.

Response: Hospitals are not required to have their EHRs certified to the 2015 Edition CEHRT standards for the full calendar year; certification should be obtained prior to the end of the eCQM reporting period to meet program requirements (for example, before December 31, 2019 for the CY 2019 reporting period).

With regard to commenters' suggestion that CMS make the reporting period for all programs that require the use of 2015 Edition CEHRT be 90 days for the CY 2019 reporting period, we are committed to the Hospital IQR and Promoting Interoperability Programs' eCQM-related policies staying in alignment to the greatest extent feasible. We refer readers to sections VIII.A.11.d.(2) and VIII.D.9. of the preamble of this final rule where we are finalizing eCQM reporting requirements in both the Hospital IQR Program and the Promoting Interoperability Programs, which will bring them into greater alignment for the CY 2019 reporting period/FY 2021 payment determination, including with regard to the number of eCQMs (4 measures), the number of calendar quarters of data (one calendar quarter of data), and which Edition of CEHRT to use (2015 Edition) for eCQM reporting. However, we are not able to align the Hospital IQR Program with the Promoting Interoperability Program's requirements for attesting to measures and objectives, which allow for one consecutive 90-day reporting period. We refer readers to section VIII.D.4. of the preamble of this final rule for more information on those requirements. We note that the Hospital IQR Program is limited to measures appropriate for the measurement of quality of care and does not allow for an attestation option.

Comment: One commenter sought guidance on whether new measures will be made a part of the certification pathway, and, if so, whether there is sufficient time to fold those new requirements into an update to the 2015 Edition.

Response: With respect to the commenter's request for clarification about the certification pathway, we note that CMS does not establish certification processes; we adopt reporting requirements based on standards set by ONC. We will share with ONC the commenter's recommendation to incorporate new measure requirements into an update to the 2015 Edition certification criteria.

Comment: A few commenters recommended that CMS monitor the transition to the 2015 Edition of CEHRT.

Response: We will continue to monitor the experiences of hospitals and health IT vendors as they transition to the 2015 Edition of CEHRT. We will continue to assess the progress of hospitals implementing certification requirements and engage in discussions with hospitals and health IT vendors regarding their experiences as we consider certification policies related to eCQM reporting in future rulemaking.

After consideration of the public comments we received, we are finalizing our proposal to require hospitals to use the 2015 Edition certification criteria for CEHRT when reporting eCQMs beginning with the CY 2019 reporting period/FY 2021 payment determination as proposed.

e. Electronic Submission Deadlines

We refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50256 through 50259) and the FY 2016 IPPS/LTCH PPS final rule (80 FR 49705 through

49708) for our previously adopted policies to align eCQM data reporting periods and submission deadlines for both the Hospital IQR Program and the Medicare Promoting Interoperability Program (previously known as the Medicare EHR Incentive Program). In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57172), we established eCQM submission deadlines for the Hospital IQR Program. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20498 through 20499), we did not propose any changes to the eCQM submission deadlines.

f. Sampling and Case Thresholds

We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50221), the FY 2012 IPPS/LTCH PPS final rule (76 FR 51641), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53537), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50819), and the FY 2016 IPPS/LTCH PPS final rule (80 FR 49709) for details on our sampling and case thresholds for the FY 2016 payment determination and subsequent years. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we did not propose any changes to our sampling and case threshold policies.

g. HCAHPS Administration and Submission Requirements

We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50220), the FY 2012 IPPS/LTCH PPS final rule (76 FR 51641 through 51643), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53537 through 53538), and the FY 2014 IPPS/LTCH PPS final rule (78 FR 50819 through 50820) for details on previously-adopted HCAHPS requirements. We also refer hospitals and HCAHPS Survey vendors to the official HCAHPS website at: <http://www.hcahponline.org> for new information and program

updates regarding the HCAHPS Survey, its administration, oversight, and data adjustments. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38328 through 38342), we finalized refinements to the three questions of the Pain Management measure in the HCAHPS Survey (now referred to as the Communication About Pain measure). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we did not propose any changes to the HCAHPS Survey administration and submission requirements. However, we refer readers to the CY 2019 OPPS/ASC proposed rule (available at: <https://www.regulations.gov/document?D=CMS-2018-0078-0001>), where we have proposed to update the HCAHPS Survey by removing the Communication About Pain questions effective with January 2022 discharges, for the FY 2024 payment determination and subsequent years. We note that we did not propose any changes to the HCAHPS Survey administration and submission requirements.

#### h. Data Submission Requirements for Structural Measures

We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51643 through 51644) and the FY 2013 IPPS/LTCH PPS final rule (77 FR 53538 through 53539) for details on the data submission requirements for structural measures. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we did not propose any changes to those requirements; however, we refer readers to sections VIII.A.5.a. and VIII.A.5.b.(1) of the preamble of this final rule, in which we discuss finalizing our proposal to remove the Hospital Survey on Patient Safety Culture and Safe Surgery Checklist Use measures as proposed. As a result, no structural measures will remain in the Hospital IQR Program and hospitals will not be required to submit any data for

structural measures for the CY 2019 reporting period/FY 2021 payment determination or subsequent years.

i. Data Submission and Reporting Requirements for HAI Measures Reported via NHSN

For details on the data submission and reporting requirements for HAI measures reported via the CDC's NHSN website, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51629 through 51633; 51644 through 51645), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53539), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50821 through 50822), and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50259 through 50262). The data submission deadlines are posted on the QualityNet website at:

<http://www.QualityNet.org/>.

While we did not propose any changes to these requirements in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we refer readers to section VIII.A.5.b.(2)(b) of the preamble of this final rule, in which we discuss finalizing our proposal to remove these measures from the Hospital IQR Program with modification to delay removal for one year. As a result, hospitals will not be required to submit any data for HAI measures via NHSN for the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination or subsequent years. We note that the five HAI measures will remain in the HAC Reduction and Hospital VBP Programs and will continue to be reported via NHSN. We further note that the HCP measure remains in the Hospital IQR Program and will continue to be reported via NHSN. We refer readers to section IV.J. of the preamble of this final rule for more information about how the NHSN HAI measures will be collected and validated under the HAC Reduction Program. We

also refer readers to section IV.I.2.c.(2) of the preamble of this final rule where we discuss retaining the NHSN HAI measures in the Hospital VBP Program.

## 12. Validation of Hospital IQR Program Data

### a. Background

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53539 through 53553), we finalized the processes and procedures for validation of chart-abstracted measures in the Hospital IQR Program for the FY 2015 payment determination and subsequent years. The FY 2013 IPPS/LTCH PPS final rule also contains a comprehensive summary of all procedures finalized in previous years that are still in effect. We refer readers to the FY 2014 IPPS/LTCH PPS final rule (78 FR 50822 through 50835), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50262 through 50273), and the FY 2016 IPPS/LTCH PPS final rule (80 FR 49710 through 49712) for detailed information on the modifications to these processes finalized for the FY 2016, FY 2017, and FY 2018 payment determinations and subsequent years. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we did not propose any changes to the existing processes for validation of either eCQM or chart-abstracted measure data.

### b. Existing Processes for Validation of Hospital IQR Program eCQM Data

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57173 through 57181), we finalized updates to the validation procedures in order to incorporate a process for validating eCQM data for the FY 2020 payment determination and subsequent years (starting with the validation of CY 2017 eCQM data that would impact FY 2020 payment determinations). We also refer readers to the FY 2018 IPPS/LTCH PPS final rule

(82 FR 38398 through 38403), in which we finalized several proposals regarding processes and procedures for validation of CY 2017 eCQM data for the FY 2020 payment determination, validation of CY 2018 eCQM data for the FY 2021 payment determination, and eCQM data validation for subsequent years. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499), we did not propose any changes to the existing processes for validation of Hospital IQR Program eCQM data.

c. Existing Process for Chart-Abstracted Measures Validation

In the FY 2015 IPPS/LTCH PPS final rule, we stated that we rely on hospitals to request an educational review or appeal cases to identify any potential CDAC or CMS errors (79 FR 50260). We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38402 through 38403) for more details on the formalized Educational Review Process for Chart-Abstracted Measures Validation. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20499 through 20500), we did not propose any changes to the validation of chart-abstracted measures, including the educational review process.

While we did not propose any changes to our previously established validation procedures in the proposed rule (83 FR 20499 through 20500), we refer readers to: (1) section VIII.A.5.b.(8) of the preamble of this final rule, in which we discuss finalizing our proposal to remove three clinical process of care measures (IMM-2, ED-1, and VTE-6) beginning with the CY 2019 reporting period/FY 2021 payment determination, and one clinical process of care measure (ED-2) beginning with the CY 2020 reporting period/FY 2022 payment determination; and (2) section VIII.A.5.b.(2)(b) of the preamble of this final rule, in which we discuss finalizing our proposals to remove five

Hospital-Acquired Infection (HAI) chart-abstracted measures from the Hospital IQR Program with modification, such that removal would be delayed by one year beginning with the CY 2020 reporting period/FY 2022 payment determination. As a result: two chart-abstracted clinical process of care measures (ED-2 and Sepsis measures) and five HAI chart-abstracted measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI measures) will remain in the Hospital IQR Program that will require validation for the FY 2021 and 2022 payment determinations; and only one chart-abstracted clinical process of care measure (Sepsis measure) will remain in the program that would require validation for the FY 2023 payment determination and subsequent years. As our validation processes remain unchanged, we will continue to sample up to 8 cases for each selected chart-abstracted clinical process of care measure. We plan to evaluate our existing validation scoring methodology to ensure that there will be no significant impact to the estimated reliability (ER) of Hospital IQR Program chart-abstracted data validation activities despite any measure removals.

In addition, the CY 2020 reporting period/FY 2022 payment determination will be the last year for which validation will occur under the Hospital IQR Program with respect to the CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI measures because, as discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we are finalizing our proposal to remove these measures with modification to delay removal for one year. Beyond the FY 2022 payment determination, validation of those measures will occur under the HAC Reduction Program, as further discussed in section IV.J.4.e. of the preamble of this final rule.

### 13. Data Accuracy and Completeness Acknowledgement (DACA) Requirements

We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53554) for previously adopted details on DACA requirements. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20500), we did not propose any changes to the DACA requirements.

### 14. Public Display Requirements

We refer readers to the FY 2008 IPPS/LTCH PPS final rule (72 FR 47364), the FY 2011 IPPS/LTCH PPS final rule (75 FR 50230), the FY 2012 IPPS/LTCH PPS final rule (76 FR 51650), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53554), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50836), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50277), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49712 through 49713), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for details on public display requirements. The Hospital IQR Program quality measures are typically reported on the *Hospital Compare* website at:

<http://www.medicare.gov/hospitalcompare>, but on occasion are reported on other CMS websites such as: <https://data.medicare.gov>.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20500), we did not propose any changes to the public display requirements. However, we note that in section VIII.A.10. of the preamble of this final rule, we discuss our efforts to provide stratified data by patient dual eligibility status in hospital confidential feedback reports and considerations to make stratified data publicly available on the *Hospital Compare* website in the future.

## 15. Reconsideration and Appeal Procedures

We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51650 through 51651), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50836), and 42 CFR 412.140(e) for details on reconsideration and appeal procedures for the FY 2017 payment determination and subsequent years. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20500), we did not propose any changes to the reconsideration and appeals procedures.

## 16. Hospital IQR Program Extraordinary Circumstances Exceptions (ECE) Policy

We refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51651 through 51652), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50836 through 50837), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50277), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49713), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57181 through 57182), the FY 2018 IPPS/LTCH PPS final rule (82 FR 38409 through 38411), and 42 CFR 412.140(c)(2) for details on the current Hospital IQR Program ECE policy. We also refer readers to the QualityNet website at: <http://www.QualityNet.org/> for our current requirements for submission of a request for an exception. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20500), we did not propose any changes to the ECE policy.

## B. PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program

### 1. Background

Section 1866(k) of the Act establishes a quality reporting program for hospitals described in section 1886(d)(1)(B)(v) of the Act (referred to as “PPS-Exempt Cancer Hospitals” or “PCHs”) that specifically applies to PCHs that meet the requirements under 42 CFR 412.23(f). Section 1866(k)(1) of the Act states that, for FY 2014 and each subsequent fiscal year, a PCH must submit data to the Secretary in accordance with section 1866(k)(2) of the Act with respect to such fiscal year.

The PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program strives to put patients first by ensuring they, along with their clinicians, are empowered to make decisions about their own health care using data-driven insights that are increasingly aligned with meaningful quality measures. To this end, we support technology that reduces burden and allows clinicians to focus on providing high quality health care to their patients. We also support innovative approaches to improve quality, accessibility, and affordability of care, while paying particular attention to improving clinicians’ and beneficiaries’ experiences when participating in CMS programs. In combination with other efforts across the Department of Health and Human Services (HSS), we believe the PCHQR Program incentivizes PCHs to improve their health care quality and value, while giving patients the tools and information needed to make the best decisions.

For additional background information, including previously finalized measures and other policies for the PCHQR Program, we refer readers to the following final rules: the FY 2013 IPPS/LTCH PPS final rule (77 FR 53556 through 53561); the FY 2014

IPPS/LTCH PPS final rule (78 FR 50838 through 50846); the FY 2015 IPPS/LTCH PPS final rule (79 FR 50277 through 50288); the FY 2016 IPPS/LTCH PPS final rule (80 FR 49713 through 49723); the FY 2017 IPPS/LTCH PPS final rule (81 FR 57182 through 57193); and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38411 through 38425).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20500 through 20510), we proposed a number of new policies for the PCHQR Program. We developed these proposals after conducting an overall review of the program under our new Meaningful Measures Initiative, which is discussed in more detail in section I.A.2. of the preambles of the proposed rule and this final rule. The proposals reflect our efforts to ensure that the PCHQR Program measure set continues to promote improved health outcomes for our beneficiaries while minimizing the following: (1) the reporting burden associated with submitting/reporting quality measures; (2) the burden associated with complying with other programmatic requirements; and/or (3) the burden associated with compliance with other Federal and/or State regulations (if applicable). In addition, we aim to minimize beneficiary confusion by reducing duplicative reporting and streamlining the process of analyzing publicly reported quality measures data. The proposals also reflect our efforts to improve the usefulness of the data that we publicly report in the PCHQR Program, which are guided by the following two goals: (1) to improve the usefulness of CMS quality program data by providing providers with adequate measure information from one program; and (2) to improve consumer understanding of the data publicly reported on

*Hospital Compare* or another website by eliminating the reporting of duplicative measure data in more than one program that applies to the same provider setting.

## 2. Factors for Removal and Retention of PCHQR Program Measures

### a. Background and Current Measure Removal Factors

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57182 through 57183), we adopted policies for measure retention and removal. We generally retain measures from the previous year's PCHQR Program measure set for subsequent years' measure sets, except when we specifically propose to remove or replace a measure. We adopted the following measure removal factors<sup>364</sup> for the PCHQR Program, which are based on factors adopted for the Hospital IQR Program (80 FR 49641 through 49642):

- Factor 1. Measure performance among PCHs is so high and unvarying that meaningful distinctions and improvements in performance can no longer be made (that is, “topped-out” measures): statistically indistinguishable performance at the 75<sup>th</sup> and 90<sup>th</sup> percentiles; and truncated coefficient of variation  $\leq 0.10$ ;
- Factor 2. A measure does not align with current clinical guidelines or practice;
- Factor 3. The availability of a more broadly applicable measure (across settings or populations) or the availability of a measure that is more proximal in time to desired patient outcomes for the particular topic;
- Factor 4. Performance or improvement on a measure does not result in better patient outcomes;

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<sup>364</sup> We note that we previously referred to these factors as “criteria” (for example, 81 FR 57182 through 57183); we now use the term “factors” in order to align the PCHQR Program terminology with the terminology we use in other CMS quality reporting and pay for performance value-based purchasing programs.

- Factor 5. The availability of a measure that is more strongly associated with desired patient outcomes for the particular topic;
- Factor 6. Collection or public reporting of a measure leads to negative unintended consequences other than patient harm; and
- Factor 7. It is not feasible to implement the measure specifications.

For the purposes of considering measures for removal from the program, we consider a measure to be “topped-out” if there is statistically indistinguishable performance at the 75th and 90th percentiles and the truncated coefficient of variation is less than or equal to 0.10.

b. Measure Retention Factors

We have also recognized that there are times when measures may meet some of the outlined criteria for removal from the program, but continue to bring value to the program. Therefore, we adopted the following factors for consideration in determining whether to retain a measure in the PCHQR Program, which also are based on factors established in the Hospital IQR Program (80 FR 49641 through 49642):

- Measure aligns with other CMS and HHS policy goals;
- Measure aligns with other CMS programs, including other quality reporting programs; and
- Measure supports efforts to move PCHs towards reporting electronic measures.

c. New Measure Removal Factor

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20501 through 20502), we proposed to adopt an additional factor to consider when evaluating potential measures for

removal from the PCHQR measure set: Factor 8, the costs associated with the measure outweigh the benefit of its continued use in the program.

As we discussed in section I.A.2. of the preambles of the proposed rule and this final rule, with respect to our new Meaningful Measures Initiative, we are engaging in efforts to ensure that the PCHQR measure set continues to promote improved health outcomes for beneficiaries while minimizing the overall costs associated with the program. We believe these costs are multifaceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the program. We have identified several different types of costs, including, but not limited to: (1) provider and clinician information collection burden and burden associated with the submission/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the cost to CMS associated with the program oversight of the measure including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other Federal and/or State regulations (if applicable). For example, it may be needlessly costly and/or of limited benefit to retain or maintain a measure which our analyses show no longer meaningfully supports program objectives (for example, informing beneficiary choice or payment scoring). It may also be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in

more than one program. CMS may also have to expend unnecessary resources to maintain the specifications for the measure, as well as the tools we need to collect, validate, analyze, and publicly report the measure data. Furthermore, beneficiaries may find it confusing to see public reporting on the same measure in different programs.

When these costs outweigh the evidence supporting the continued use of a measure in the PCHQR Program, we believe it may be appropriate to remove the measure from the program. Although we recognize that one of the main goals of the PCHQR Program is to improve beneficiary outcomes by incentivizing health care providers to focus on specific care issues and making public data related to those issues, we also recognize that those goals can have limited utility where, for example, the publicly reported data is of limited use because it cannot be easily interpreted by beneficiaries and used to influence their choice of providers. In these cases, removing the measure from the PCHQR Program may better accommodate the costs of program administration and compliance without sacrificing improved health outcomes and beneficiary choice.

We proposed that we would remove measures based on this factor on a case-by-case basis. We might, for example, decide to retain a measure that is burdensome for health care providers to report if we conclude that the benefit to beneficiaries justifies the reporting burden. Our goal is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients.

We invited public comment on our proposal to adopt an additional measure removal factor, “the costs associated with a measure outweigh the benefit of its continued use in the program,” beginning with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

Comment: One commenter supported the newly proposed measure removal criteria, noting that the broad application of this criterion helps to streamline CMS’ quality programs. The commenter encouraged CMS to not remove measures simply because a previously finalized measure was too difficult to implement, thereby creating a gap in the measure set, but rather attempt to identify ways to gather the appropriate data by different means.

Response: We thank the commenter for its support. We note that it is never our intent to remove measures solely based on ease of implementation. Further, implementation concerns are something we take into account when proposing to adopt a measure. As discussed in section VIII.B.2.b of the preamble of this final rule, the removal of measures under the newly proposed Factor 8 will serve to balance the costs of ongoing maintenance, reporting/collection, and public reporting with the benefit associated with the reporting of that data. We intend to be transparent in our assessment of measures under this measure removal factor. As described above, there are various considerations of costs and benefits, direct and indirect, financial and otherwise, that we will evaluate in applying removal Factor 8, and we will take into consideration the perspectives of multiple stakeholders. We believe costs include costs to stakeholders such as patients, caregivers, providers, CMS, and other entities. Additionally, we note

that the benefits we will consider center around benefits to patients and consumers as the primary beneficiaries of our quality reporting and value-based payment programs.

Comment: One commenter requested clarification regarding whose benefit is being considered when evaluating whether “the costs associated with the measure outweigh the benefit of its continued use in the program.” The commenter noted that there is considerable focus on the cost of the measure, but a transparent process must be put in place to weigh the patient benefit against the cost of the measure. The commenter appreciated that CMS will propose removing measures based on Factor 8 on a case-by-case basis and strongly encouraged CMS to survey patients to understand if they feel the measures are beneficial.

Response: We understand the importance of transparency in our processes, and we reaffirm that we prioritize the impact on patients when assessing the adoption and/or retention of quality metrics in our quality reporting programs. We reiterate that we intend to evaluate each measure on a case-by-case basis, and to balance the costs with the benefits to a variety of stakeholders. These stakeholders include, but are not limited to, patients and their families or caregivers, providers, the healthcare research community, healthcare payers, and patient and family advocates. Because for each measure the relative benefit to each stakeholder may vary, we believe that the benefits to be evaluated for each measure are specific to the measure and the original rationale for including the measure in the program.

Comment: One commenter did not support the proposed adoption and use of Factor 8 in any of CMS’ programs, due to lack of transparency around assessment

criteria. The commenter noted that the assessment of value must be as transparent as possible with a clear prioritization of the needs of patients/consumers. The commenter urged CMS to develop a standardized evaluation and scoring system with significant multi-stakeholder input, to ensure that Factor 8 appropriately balances the needs of all health care stakeholders.

Response: We thank the commenter for its feedback. We intend to evaluate each measure on a case-by-case basis, while considering input from a variety of stakeholders, including, but not limited to: patients, caregivers, patient and family advocates, providers, provider associations, healthcare researchers, data vendors, and other stakeholders with insight into the benefits and costs (financial and otherwise), and will continue to do so in the future when proposing measures for adoption or retention in the PCHQR Program. Further, preliminary stakeholder input on data collection and reporting burden was instrumental in the derivation of the newly proposed removal factor. As discussed in section VIII.B.2.b. of the preamble of this final rule, above, the removal of measures under Factor 8 will function as a balancing test between the cost of ongoing maintenance, reporting/collection, and public reporting against the benefit associated with reporting that data. We note that we intend to assess the costs and benefits to all program stakeholders.

After consideration of the public comments we received, we are finalizing our proposal to adopt the new measure removal Factor 8, “the costs associated with a measure outweigh the benefit of its continued use in the program,” beginning with the effective date of the FY 2019 IPPS/LTCH PPS final rule.

### 3. Retention and Removal of Previously Finalized Quality Measures for PCHs

Beginning with the FY 2021 Program Year

#### a. Background

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53556 through 53561), we finalized five quality measures for the FY 2014 program year and subsequent years. In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50837 through 50847), we finalized one new quality measure for the FY 2015 program year and subsequent years and 12 new quality measures for the FY 2016 program year and subsequent years. In the FY 2015 IPPS/LTCH PPS final rule (79 FR 50278 through 50280), we finalized one new quality measure for the FY 2017 program year and subsequent years. In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49713 through 49719), we finalized three new Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) measures for the FY 2018 program year and subsequent years, and finalized the removal of six previously finalized measures for fourth quarter (Q4) 2015 discharges and subsequent years. In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57183 through 57184), for the FY 2019 program year and subsequent years, we finalized one additional quality measure and updated the Oncology: Radiation Dose Limits to Normal Tissues (NQF #0382) measure. In the FY 2018 IPPS/LTCH PPS final rule, we finalized four new quality measures (82 FR 38414 through 38420) for the FY 2020 program year and subsequent years, and finalized the removal of three previously finalized measures (82 FR 38412 through 38414).

b. Removal of Measures from the PCHQR Program Beginning with the FY 2021

Program Year

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20502 through 20503), we proposed to remove four web-based, structural measures from the PCHQR Program beginning with the FY 2021 program year because they are topped-out:

- Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382);
- Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384);
- Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and
- Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389).

We also proposed (83 FR 20503) to apply the newly proposed measure removal factor to two National Healthcare Safety Network (NHSN) chart-abstracted measures and, if that factor is finalized, to remove both measures from the PCHQR Program beginning with the FY 2021 program year because we have concluded that the costs associated with these measures outweigh the benefit of their continued use in the program. The measures we proposed to remove on this basis are as follows:

- NHSN Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138); and
- NHSN Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139).

### (1) Removal of Web-Based Structural Measures

We proposed to remove the following web-based, structural measures beginning with the FY 2021 program year because they are topped-out: (1) Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389). We first adopted these measures for the FY 2016 program year in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50841 through 50844). We refer readers to that final rule for a detailed discussion of the measures.

Based on an analysis of data from January 1, 2015 through December 31, 2016, we have determined that these three measures meet our topped-out criteria. This analysis evaluated data sets and calculated the 5th, 10th, 25th, 50th, 75th, 90th, and 95th percentiles of national facility performance for each measure. For measures where higher values indicate better performance, the percent relative difference (PRD) between the 75th and 90th percentiles were obtained by taking their absolute difference divided by the average of their values and multiplying the result by 100. To calculate the truncated coefficient of variation (TCV), the lowest 5 percent and the highest 5 percent of hospital rates were discarded before calculating the mean and standard deviation for each measure.

The following criteria were applied to the results:

- For measures ranging from 0-100 percent, with 100 percent being best, national measure data for the 75th and 90th percentiles have a relative difference of  $\leq 5$  percent, or for measures ranging from 0-100 percent, with 100 percent being the best, performance achieved by the median hospital is  $\geq 95$  percent, and national measure data have a truncated coefficient of variation  $\leq 0.10$ .

- For measures ranging from 0-100 percent, with 0 percent being best, national measure data for the complement of the 10th and 25th percentiles have a relative difference of  $\leq 5$  percent, or for measures ranging from 0-100 percent, with 0 percent being best, national measure data for the median hospital is  $\leq 5$  percent, or for other measures with a low number indicating good performance, national measure data for the 10th and 25th percentiles have a relative difference of  $\leq 5$  percent, and national measure data have a truncated coefficient of variation  $\leq 0.10$ .

The results for 2015 and 2016 are set out in the tables below.

**Topped-Out Analysis Results for PCHQR Measures (2015)**

Measure	Mean	Median	75th Percentile	90th Percentile	Relative Difference (%)	Topped - out
PCH-14	98.4	99.6	100	100	0	Yes
PCH-16	92.5	92.3	93.1	94.3	1.2	Yes
PCH-17	99.7	100	100	100	0	Yes
PCH-18	98.9	99.4	100	100	0	Yes

**Topped-Out Analysis Results for PCHQR Measures (2016)**

Measure	Mean	Median	75th Percentile	90th Percentile	Relative Difference (%)	Topped - out
PCH-14	99.8	100	100	100	0	Yes
PCH-16	96.8	96.8	97.3	97.4	0.1	Yes

Measure	Mean	Median	75th Percentile	90th Percentile	Relative Difference (%)	Topped - out
PCH-17	99.4	99.6	100	100	0	Yes
PCH-18	99.0	100	100	100	0	Yes

Based on this analysis, we have concluded that these four measures are topped-out and, as discussed below, we believe that collecting PCH data on these measures does not further program goals.

We also believe that continuing to collect PCH data on these measures does not further program goals of improving quality, given that performance on the measures is so high and unvarying that meaningful distinctions and improvements in performance can no longer be made. We believe that these measures also do not meet the criteria for retention of an otherwise topped-out measure, as they: do not align with the HHS and CMS policy goal to focus our measure set on outcome measures; do not align with measures used in other CMS programs; and do not support our efforts to develop electronic clinical quality measure reporting for PCHs. If we determine at a subsequent point in the future that PCH adherence to the aforementioned HHS and CMS policy goals, the aforementioned program efforts, and the standard of care established by the measure has unacceptably declined, we may propose to readopt these measures in future rulemaking.

We invited public comment on our proposal to remove these four measures from the PCHQR Program beginning with the FY 2021 program year.

Comment: A few commenters supported the proposed removal of the four web-based, structural measures. The commenters noted that topped-out measures

provide little in the way of useful quality differentiation and cannot, by definition, incentivize meaningful quality improvement. Moreover, the removal of these measures will help to reduce the administrative burden of the PCHQR Program.

Response: We thank the commenters for their support.

Comment: One commenter did not support the proposed removal of the Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18) measure from the PCHQR Program. The commenter indicated that this measure is currently included in the CQMC Oncology measure set. As part of a joint effort to implement meaningful measures that will promote accountability and drive improvement across stakeholders, the commenter recommended retaining the measure in the program until the CQMC is able to jointly re-evaluate the measure's inclusion in the Oncology measure set.

Response: We appreciate the commenter's input. However, as demonstrated by the data provided in the tables displaying the 2015 and 2016 results for this measure above, this measure is statistically topped-out. Consequently, continued reporting of the measure provides limited opportunity for continuing quality improvement, while continuing to incur reporting burden to care providers. We believe that the removal of this measure from the PCHQR Program aligns with one of the governing tenets of the Core Quality Measure Collaborative (CQMC): *promotion of measurement that is evidence-based and generates valuable information for quality improvement.*<sup>365</sup> We note

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<sup>365</sup> Centers for Medicare and Medicaid Services: "Core Measures." Accessed on: June 26, 2018. Available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/Core-Measures.html>.

that topped out status is an example of a situation where Factor 1 could be used for measure removal, but is not a prerequisite to its use. Further, the PCHQR Program is not bound to removing measures solely because they are topped out, however, in this scenario, the data for this measure demonstrate that meaningful distinctions and improvements in performance can no longer be made.

Comment: One commenter indicated that the removal of Oncology: Medical and Radiation — Pain Intensity Quantified (NQF #0384) is unique from the other web-based, structural measures proposed for removal, in that it was validated and endorsed by its measure developer and NQF as a paired measure with the Oncology: Plan of Care for Pain — Medical and Radiation Oncology (NQF #0383). Given that the collection of data for NQF #0384 will continue to be necessary in order to obtain the eligible patient population for NQF #0383, the commenter recommends that these measures either be included or excluded from the PCHQR Program as a pair.

Response: We thank the commenter for its recommendation. While we recognize the pairing of these two measures in the PCHQR Program, the Oncology: Medical and Radiation – Pain Intensity Quantified (NQF #0384) measure remains statistically topped out, while its companion measure, Oncology: Plan of Care for Pain (NQF #0383) is not. We further note that the Oncology: Medical and Radiation – Pain Intensity Quantified (NQF #0384) measure is duplicative as a plan of care for pain measure. We therefore believe that the Oncology: Plan of Care for Pain — Medical and Radiation Oncology (NQF #0383) measure suffices to assess cancer patient pain treatment. Further, we believe the Oncology: Plan of Care for Pain measure will continue

to incentivize continued quality improvement through public reporting in the PCHQR Program. As the commenter noted, the submission of data does not change, which will allow CMS to monitor for unintended consequences related to the removal of the measure.

After consideration of the public comments we received, we are finalizing the removal of the following web-based, structural measures beginning with the FY 2021 program year: (1) Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389).

(2) Removal of National Healthcare Safety Network (NHSN) Chart-Abstracted Measures

We proposed to remove two measures from the PCHQR Program beginning with the FY 2021 program year if the measure removal factor “the costs associated with the measure outweigh the benefit of its continued use in the program,” proposed for adoption in section VIII.B.2.c. of the preamble of the proposed rule, is finalized because we have concluded that the costs associated with these measures outweigh the benefit of their continued use in the PCHQR Program. These measures are: (1) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138); and (2) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139). We first adopted the CAUTI and CLABSI measures for the

FY 2014 program year in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53557 through 53559); we refer readers to this final rule for a detailed discussion of the measures.

As discussed in section I.A.2. of the preambles of the proposed rule and this final rule, above, our Meaningful Measures Initiative is intended to reduce costs and minimize burden. We continue to believe the CAUTI and CLABSI measures provide important data for patients and hospitals in making decisions about care and informing quality improvement efforts. However, we believe that removing these measures in the PCHQR Program will reduce program costs and complexities associated with the use of these data by patients in decision-making. We believe the costs, coupled with the high technical and administrative burden on PCHs, associated with collecting and reporting this measure data outweigh the benefits to continued use in the program. Further, we note that it has become difficult to publicly report these measures due to the low volume of data produced and reported by the small number of facilities participating in the PCHQR Program and the corresponding lack of an appropriate methodology to publicly report this data. Consequently, we have been unable to offer beneficiaries the benefit of pertinent information on how these measures assess hospital-acquired infections and impact patient safety.

As we state in section I.A.2. of the preambles of the proposed rule and this final rule, we strive to ensure that patients are empowered to make decisions about their health care by using information from data-driven insights. We continue to believe that these measures evaluate important aspects of patient safety. However, as discussed earlier, we believe the high costs, reporting burden, and difficulties associated with publicly

reporting this data for use by patients in making decisions about their care outweigh the benefit associated with the measures' continued use in the PCHQR Program. Therefore, in the proposed rule we stated that if our proposal to adopt the new measure removal factor described in section VIII.B.2.c. of the preambles of the proposed rule and this final rule is finalized as proposed, we proposed that under that factor, we would remove the CAUTI and CLABSI measures from the PCHQR Program beginning with the FY 2021 program year.

We invited public comment on our proposal to remove these two measures from the PCHQR Program beginning with the FY 2021 program year. We are conducting additional data analyses to assess measure performance based on new information provided by the CDC. In acknowledgement of the importance of these measures in assessing patient safety in the PCH setting, we want to be cautious to not prematurely remove measures from the PCHQR Program. As such, we wish to evaluate these data for trends that link positive improvements (i.e., a decrease in the reporting burden and/or cost, and/or demonstrated feasibility for public reporting) to these measures. We note that the data recently submitted by the CDC were not available at the time we proposed the removal of these measures from the PCHQR Program. Moreover, we will reconcile the comments received on the proposed removal of the Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139) measures in a future 2018 final rule, most likely in the CY 2019 OPPS/ASC final rule targeted for release no later than November 2018. We also note that the deferral to the CY 2019

OPPS/ASC final rule will not affect PCH data submission because we proposed to end data collection beginning in CY 2019.

#### 4. New Quality Measures Beginning with the FY 2021 Program Year

##### a. Considerations in the Selection of Quality Measures

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53556), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50837 through 50838), and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50278), we indicated that we take many principles into consideration when developing and selecting measures for the PCHQR Program, and that many of these principles are modeled on those we use for measure development and selection under the Hospital IQR Program. In section I.A.2. of the preambles of the proposed rule and this final rule, we also discuss our Meaningful Measures Initiative, and its relation to how we will assess and select quality measures for the PCHQR Program.

Section 1866(k)(3)(A) of the Act requires that any measure specified by the Secretary must have been endorsed by the entity with a contract under section 1890(a) of the Act (the NQF is the entity that currently holds this contract). Section 1866(k)(3)(B) of the Act provides an exception under which, in the case of a specified area or medical topic determined appropriate by the Secretary for which a feasible and practical measure has not been endorsed by the entity with a contract under section 1890(a) of the Act, the Secretary may specify a measure that is not so endorsed as long as due consideration is given to measures that have been endorsed or adopted by a consensus organization.

Using these principles for measure selection in the PCHQR Program, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20503 through 20506), we proposed one new measure, described below.

b. New Quality Measure Beginning with the FY 2021 Program Year: 30-Day Unplanned Readmissions for Cancer Patients (NQF #3188)

In an effort to expand the PCHQR Program measure set to include measures that are less burdensome to report to CMS, but provide valuable information for beneficiaries, we proposed to adopt the 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188) for the FY 2021 program year and subsequent years. This measure meets the requirement under section 1866(k)(3)(A) of the Act that measures specified for the PCHQR Program be endorsed by the entity with a contract under section 1890(a) of the Act (currently the NQF). This measure aligns with recent initiatives to incorporate more outcome measures in quality reporting programs. This measure also aligns with the Promote Effective Communication and Coordination of Care domain of our Meaningful Measures Initiative,<sup>366</sup> and would fill an existing gap area of risk-adjusted readmission measures in the PCHQR Program.

In compliance with section 1890A(a)(2) of the Act, the proposed measure was included on a publicly available document entitled “2017 Measures under Consideration Spreadsheet,”<sup>367</sup> a list of quality and efficiency measures under consideration for use in

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<sup>366</sup> Overview of the CMS Meaningful Measures Initiative available at: <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-releases/2017-Press-releases-items/2017-10-30.html>.

<sup>367</sup> 2017 Spreadsheet of Measures Under Consideration. Available at: [http://www.qualityforum.org/Show\\_Content.aspx?id=30279](http://www.qualityforum.org/Show_Content.aspx?id=30279).

various Medicare programs, and was reviewed by the Measures Application Partnership (MAP) Hospital Workgroup.

(1) Background

Cancer is the second leading cause of death in the United States, with nearly 600,000 cancer-related deaths expected this year. It is estimated roughly 1.7 million Americans will be diagnosed with cancer in 2016, and the number of Americans living with a cancer diagnosis reached nearly 14.5 million in 2014.<sup>368</sup> Cancer disproportionately affects older Americans, with 86 percent of all cancers diagnosed in people 50 years of age and older.<sup>369</sup> It is now the leading cause of death among adults age 40 to 79 years nationwide, and the leading cause of death among all adults in 21 States.<sup>370</sup> Oncology care contributes greatly to Medicare spending, and accounted for an estimated \$125 billion in health care spending in 2010.<sup>371</sup> This figure is projected to rise to between \$173 billion and \$207 billion by 2020.<sup>372</sup> A 2012 audit from the US Government Accountability Office (GAO) revealed that the estimated differences in Medicare payment between PCHs and local PPS teaching hospitals varied greatly across the PCHs; with the largest payment difference at 90.9 percent and the smallest payment difference at 6.7 percent. Overall, the difference between the amount Medicare paid PCHs and the estimated amount Medicare would have paid PPS hospitals for treating

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<sup>368</sup> NIH's National Cancer Institute Statistics. Available at: <https://www.cancer.gov/about-cancer/understanding/statistics>.

<sup>369</sup> American Cancer Society. Cancer facts and figures 2016. 2016. Available at: <http://www.cancer.org/acs/groups/content/@research/documents/document/acspsc-047079.pdf>.

<sup>370</sup> Siegel RL, Miller KD, Jemal A. Cancer statistics, 2016. *CA Cancer J Clin*. 2016;66(1):7-30.

<sup>371</sup> Mariotto AB, Yabroff KR, Shao Y, Feuer EJ, Brown ML. Projections of the cost of cancer care in the United States: 2010-2020. *J Natl Cancer Inst*. 2011;103(2):117-128.

<sup>372</sup> Ibid.

comparable cancer patients suggests that Medicare would have saved approximately \$166 million in 2012.<sup>373</sup> Further, GAO calculated that, if PCHs were paid for outpatient services in the same way as PPS teaching hospitals, Medicare would have saved approximately \$303 million in 2012.<sup>374</sup>

Given the current and projected increases in cancer prevalence and costs of care, it is essential that health care providers look for opportunities to lower the costs of cancer care. Reducing readmissions after hospital discharge has been proposed as an effective means of lowering health care costs and improving the outcomes of care.<sup>375</sup> Research suggests that between 9 percent and 48 percent of all hospital readmissions are preventable, owing to inadequate treatment during the patient's original admission or after discharge.<sup>376</sup> It is estimated that all-cause, unplanned readmissions cost the Medicare program \$17.4 billion in 2004.<sup>377</sup> Unnecessary hospital readmissions also negatively impact cancer patients by compromising their quality of life, placing them at risk for health-acquired infections, and increasing the costs of their care.<sup>378</sup> Furthermore, unplanned readmissions during treatment can delay treatment completion and, potentially, worsen patient prognosis.<sup>379</sup>

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<sup>373</sup> US Government Accountability Office. "Medicare Payments to Certain Cancer Hospitals." Accessed on March 9, 2018. Available at: [https://www.gao.gov/modules/ereport/handler.php?1=1&path=/ereport/GAO-15-404SP/data\\_center\\_savings/Health/19.\\_Medicare\\_Payments\\_to\\_Certain\\_Cancer\\_Hospitals](https://www.gao.gov/modules/ereport/handler.php?1=1&path=/ereport/GAO-15-404SP/data_center_savings/Health/19._Medicare_Payments_to_Certain_Cancer_Hospitals).

<sup>374</sup> Ibid.

<sup>375</sup> Benbassat J, Taragin M. Hospital readmissions as a measure of quality of health care: advantages and limitations. *Arch Intern Med*. 2000;160(8):1074-108.

<sup>376</sup> Ibid.

<sup>377</sup> Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. *N Engl J Med*. 2009;360(14):1418-1428.

<sup>378</sup> Ibid.

<sup>379</sup> Ibid.

Preventing these readmissions improves the quality of care for cancer patients. Existing studies in cancer patients have largely focused on postoperative readmissions, reporting readmission rates of between 6.5 percent and 25 percent.<sup>380</sup> One study noted that surgical cancer patients were most often readmitted for surgical complications, while nonsurgical patients were typically readmitted for the same condition treated during the index admission.<sup>381</sup> Together, these studies suggest that certain readmissions in cancer patients are preventable and should be routinely measured for purposes of quality improvement and accountability.

## (2) Overview of Measure

Readmission rates have been developed for pneumonia, acute myocardial infarction, and heart failure. However, the development of validated readmission rates for cancer patients has lagged. In 2012, the Comprehensive Cancer Center Consortium for Quality Improvement, or C4QI (a group of 18 academic medical centers that collaborate to measure and improve the quality of cancer care in their centers), began development of a cancer-specific unplanned readmissions measure: 30-Day Unplanned Readmissions for Cancer Patients. This measure incorporates the unique clinical characteristics of oncology patients and results in readmission rates that more accurately reflect the quality of cancer care delivery, when compared with broader readmissions measures. Likewise, this measure addresses gaps in existing readmissions measures (such as the Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)

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<sup>380</sup> Rochefort MM, Tomlinson JS. Unexpected readmissions after major cancer surgery: an evaluation of readmissions as a quality-of-care indicator. *Surg Oncol Clin N Am.* 2012;21(3):397-405, viii.

<sup>381</sup> Ji H, Abushomar H, Chen XK, Qian C, Gerson D. All-cause readmission to acute care for cancer patients. *Healthc Q.* 2012;15(3):14-16.

stewarded by CMS) related to the evaluation of hospital readmissions associated cancer patients. The 30-Day Unplanned Readmissions for Cancer Patients measure can be used by PCHs to inform their quality improvement efforts. Through adoption in the PCHQR Program, it can increase transparency around the quality of care delivered to patients with cancer.

The 30-Day Unplanned Readmissions for Cancer Patients measure is NQF-endorsed (NQF #3188). The MAP Hospital Workgroup reviewed this measure on December 14, 2017 and supported the inclusion of this measure in the PCHQR Program. The MAP acknowledged that this measure is fully developed and tested and further noted this measure fills a current gap in the PCHQR Program by addressing unplanned readmissions of cancer patients.<sup>382,383</sup>

The proposed readmission measure fits within the Promote Effective Communication and Coordination of Care measurement domain (categorical area), and specifically applies to the associated clinical topic of “Admissions and Readmissions to Hospitals” of our Meaningful Measures Initiative. This measure is intended to assess the rate of unplanned readmissions among cancer patients treated at PCHs and to support improved care delivery and quality of life for this patient population. By providing an accurate and comprehensive assessment of unplanned readmissions within 30 days of discharge, PCHs can better identify and address preventable readmissions. Through

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<sup>382</sup> 2018 Considerations for Implementing Measures Draft Report-Hospitals. Available at: [http://www.qualityforum.org/Show\\_Content.aspx?id=30279](http://www.qualityforum.org/Show_Content.aspx?id=30279).

<sup>383</sup> 2017-2018 Spreadsheet of Final Recommendations to HHS and CMS. Available at: <http://www.qualityforum.org/ProjectMaterials.aspx?projectID=75367>.

routine monitoring of these performance data by PCHs, this measure can be used to improve patient outcomes and quality of care.

### (3) Data Sources

The proposed 30-Day Unplanned Readmissions for Cancer Patients measure is claims-based. Therefore, PCHs would not be required to submit any new data for purposes of reporting this measure. We proposed that we would calculate this measure on a yearly basis using Medicare administrative claims data. Specifically, we proposed that the data collection period for each program year would span from July 1 of the year, three years prior to the program year to June 30 of the year, two years prior to the program year. Therefore, for the FY 2021 program year, we would calculate measure rates using PCH claims data from October 1, 2018 through September 30, 2019.

We assessed the measure's reliability, and set a minimum case count of 50 index admissions (25 per subset) per PCH. There were 3,502 facilities<sup>384</sup> included in the 100 split-half simulations for CY 2013 through CY 2015. In our reliability assessment, we examined the reliability of the measure by testing the hypothesis that the mean S-B statistic from each year was greater than 0.5. The S-B statistic allows us to project what the reliability would be if the entire sample were used instead of the split sample.

Overall, the consistent calculations between the two data randomly-split subsets for each period provided evidence that performance variations between PCHs were attributable to hospital-level factors, rather than patient-level factors. Regarding the

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<sup>384</sup> We note that hospital testing occurred prior to our proposal for PCHQR Program inclusion. As such, the sample size is far greater than the number of applicable PCHs for which implementation this measure is being proposed for use to ensure data reliability.

validity of this measure, global sensitivity and specificity scores of 0.879 and 0.896, respectively, confirmed the validity of the Type of Admission/Visit reported via the UB-04 Uniform Bill Locator 14 (Claim Inpatient Admission Type Code<sup>385</sup> in the Medicare SAF) to accurately identify planned and unplanned readmissions, as validated by chart review. Together, these statistics indicate that there are opportunities to utilize this measure to reduced unplanned readmissions in cancer patients, making it useful for performance improvement and public reporting. Additional details on the testing results for this measure are provided in the testing attachment, which is available at:

<http://www.qualityforum.org/ProjectMeasures.aspx?projectID=86089>.

#### (4) Measure Calculation

This outcome measure utilizes claims data to demonstrate the rate at which adult cancer patients have unplanned readmissions within 30 days of discharge from an eligible index admission. The numerator includes all eligible unplanned readmissions to the PCH within 30 days of the discharge date from an index admission to the PCH that is included in the measure denominator. The denominator includes inpatient admissions for all adult Medicare fee-for-service (FFS) beneficiaries where the patient is discharged from a short-term acute care hospital (PCH, short-term acute care PPS hospital, or CAH) with a principal or secondary diagnosis (that is, not admitting diagnosis) of malignant cancer within the defined measurement period. The measure excludes readmissions for patients readmitted for chemotherapy or radiation therapy treatment or with disease progression.

The measure will be calculated as the numerator divided by the denominator. Measure

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<sup>385</sup> Claim Inpatient Admission Type Code available at: <https://www.resdac.org/cms-data/variables/Claim-Inpatient-Admission-Type-Code>.

specifications for the proposed measure can be accessed on the NQF's website at:

<http://www.qualityforum.org/ProjectMeasures.aspx?projectID=86089>.

(5) Cohort

This measure includes inpatient admissions for all adult Medicare FFS beneficiaries where the patient is discharged from a short-term acute care hospital (PCH, short-term acute care PPS hospital, or CAH) with a principal or secondary diagnosis (that is, not admitting diagnosis) of malignant cancer within the defined measurement period. Additional methodology and measure development details are available on the NQF's website at: <http://www.qualityforum.org/ProjectMeasures.aspx?projectID=86089>.

(6) Risk Adjustment

This measure is risk-adjusted based on a comparison of observed versus expected readmission rates. Logistic regression analysis is used to estimate the probability of an unplanned readmission, based on the measure specifications and risk factors described herein. The probability of unplanned readmission is then summed over the index admissions for each hospital to calculate the *expected* unplanned readmission rate. Subsequently, the actual or *observed* unplanned readmissions for each hospital are summed and used to calculate the ratio of *observed* unplanned readmissions to *expected* unplanned readmissions for each hospital. Each hospital's ratio was then multiplied by the national or standard unplanned readmissions rate to generate the risk-adjusted *30-Day Unplanned Readmissions for Cancer Patients* rate (as specified in the following formula):

$$\text{Risk - Adjusted Rate} = \frac{\text{observed rate}}{\text{expected rate}} \times \text{national or standard rate}$$

We invited public comment on our proposal to adopt the 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188) for the FY 2021 program year and subsequent years.

Comment: Several commenters supported the proposed adoption of the 30-Day Unplanned Readmissions for Cancer Patients measure. The commenters noted that this measure is fully developed, tested, and NQF-endorsed. Further, the commenters noted that: the MAP supported this measure as filling an unmet measure gap for unplanned readmissions that are cancer-specific in the PCHQR Program; this measure incorporates the unique clinical characteristics of oncology patients and will provide specific readmissions data that more accurately reflects the quality of cancer care delivery that will be hugely beneficial information for patients; this measure includes both surgical and non-surgical cancer patients who are admitted urgently or emergently to cancer hospitals or other hospitals within 30 days of an index admission, while, at the same time, it excludes readmissions for chemotherapy or radiation therapy, as well as patients seeking treatment for disease progression. Moreover, the commenters noted that these features allow hospitals to better identify and address preventable readmissions for cancer patients than current readmissions measures. The commenters stated that ultimately, the inclusion of this measure in the PCHQR Program will promote higher-value care for cancer patients and improve patient outcomes in the domain of hospital readmissions.

Response: We thank the commenters for their support.

Comment: One commenter did not support the proposed adoption of the 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188). The commenter

expressed concerns that assigning accountability will be particularly challenging for this measure. Specifically, the commenter indicated that due to the severity of illness that many patients experience related to their cancer diagnosis, it would be misguided to assign responsibility and penalize other caregivers for readmissions associated with cancer patients. The commenter also requested clarification regarding the proposed data collection period for the measure because the proposed rule stated that the collection for this measure for the FY 2021 program year would begin July 1, 2018 and go through June 30, 2019 while also identifying the first data collection period for the FY 2021 program year as running from October 1, 2018 through September 30, 2019.

Response: We thank the commenter for its views, however, we disagree that assessing accountability would be difficult with this measure. We are finalizing that the data collection period for the FY 2021 program year and subsequent years for this measure will be October 1 through September 30 of the following calendar year, for each respective program year. Specifically, as indicated in section VIII.B.9.b. of the preamble of this final rule, for the FY 2021 program year, this corresponds to a data collection period of October 1, 2018- September 30, 2019. We note that the date range of July 1, 2018- June 30, 2019, provided in section VIII.B.4.b.(3) of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20505) was an error, and we have corrected it in the corresponding section of the preamble in this final rule. Moreover, this one-year timeframe narrows the examination period for the assessment of caregivers, thereby making it less difficult to evaluate where in the process a readmission could have been preempted, and easier to evaluate provider attribution.

With regards to patient illness severity, we understand that there are confounding healthcare factors that contribute to the severity of illness that many patients experience related to their cancer diagnosis; however, we believe that assessing patient readmissions is a proactive method that PCHs can use to hone in on which (if any) of these factors could be remedied and/or prevented with improved quality care. We believe that it is most beneficial to patients to be able to understand causes and/or, where possible, observe trends in cancer patient readmissions, in an effort to establish practices that eliminate readmissions. We reiterate that we are only assessing the care provided within a one-year timeframe. We also reiterate that the measure excludes readmissions for patients readmitted for chemotherapy or radiation therapy treatment or with disease progression.

After consideration of the public comments we received, we are finalizing the adoption of the 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188) for the FY 2021 program year and subsequent years. We are also finalizing that the data collection period for the FY 2021 program year and subsequent years for this measure will be October 1 through September 30 of the following calendar year, for each respective program year.

c. Summary of Finalized PCHQR Program Measures for the FY 2021 Program Year and Subsequent Years

The table below summarizes the PCHQR Program measure set for the FY 2021 program year:

**FY 2021 PCHQR Program Measure Set**

Short Name	NQF Number	Measure Name
<b>Safety and Healthcare-Associated Infection (HAI)*</b>		
CAUTI*	0138	National Healthcare Safety Network (NHSN) Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure
CLABSI*	0139	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection (CLABSI) Outcome Measure
Colon and Abdominal Hysterectomy SSI	0753	American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure [currently includes SSIs following Colon Surgery and Abdominal Hysterectomy Surgery]
CDI	1717	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure
MRSA	1716	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> Bacteremia Outcome Measure
HCP	0431	National Healthcare Safety Network (NHSN) Influenza Vaccination Coverage Among Healthcare Personnel
<b>Clinical Process/Oncology Care Measures</b>		
N/A	0383	Oncology: Plan of Care for Pain – Medical Oncology and Radiation Oncology
EOL-Chemo	0210	Proportion of Patients Who Died from Cancer Receiving Chemotherapy in the Last 14 Days of Life
EOL-Hospice	0215	Proportion of Patients Who Died from Cancer Not Admitted to Hospice
<b>Intermediate Clinical Outcome Measures</b>		
EOL-ICU	0213	Proportion of Patients Who Died from Cancer Admitted to the ICU in the Last 30 Days of Life
EOL-3DH	0216	Proportion of Patients Who Died from Cancer Admitted to Hospice for Less Than Three Days
<b>Patient Engagement/Experience of Care</b>		
HCAHPS	0166	HCAHPS
<b>Clinical Effectiveness Measure</b>		
EBRT	1822	External Beam Radiotherapy for Bone Metastases

Short Name	NQF Number	Measure Name
<b>Claims Based Outcome Measures</b>		
N/A	N/A	Admissions and Emergency Department (ED) Visits for Patients Receiving Outpatient Chemotherapy
N/A**	3188	30-Day Unplanned Readmissions for Cancer Patients

\* As discussed in section VIII.B.3.b.(2) of this final rule, we are deferring finalization of our policies regarding future use of the CLABSI and CAUTI measures in the PCHQR Program until the CY 2019 OPSS/ASC final rule.

\*\* Measure finalized for adoption for the FY 2021 program year and subsequent years.

### 5. Accounting for Social Risk Factors in the PCHQR Program

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428 through 38429), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>386</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social

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<sup>386</sup> See, for example United States Department of Health and Human Services. “Healthy People 2020: Disparities. 2014.” Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

risk factors in CMS value-based purchasing programs.<sup>387</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428 through 38429), ASPE’s report to Congress found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>388</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that “measures with a conceptual basis for adjustment generally did not demonstrate an empirical relationship” between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has extended the socioeconomic status (SES) trial,<sup>389</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018/CY 2018 proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a hospital or provider that would also allow

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<sup>387</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), “Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs.” December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

<sup>388</sup> Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

<sup>389</sup> Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

for a comparison of those differences, or disparities, across providers. Feedback we received across our quality reporting programs included encouraging CMS to explore whether factors that could be used to stratify or risk adjust the measures (beyond dual eligibility); considering the full range of differences in patient backgrounds that might affect outcomes; exploring risk adjustment approaches; and offering careful consideration of what type of information display would be most useful to the public. We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care. Commenters encouraged us to stratify measures by other social risk factors such as age, income, and educational attainment. Regarding value-based purchasing programs, commenters also cautioned to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to more medically complex patients. Commenters also noted that value-based purchasing program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

As a next step, CMS is considering options to improve health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We also are considering how this work applies to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final

rule (82 FR 38403 through 38409) for more details, where we discuss the potential stratification of certain Hospital IQR Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

Comment: A few commenters supported CMS' continued efforts to account for social risk factors in its quality reporting programs. The commenters noted that stratifying public reporting of program quality measures would help hospitals to balance the task of identifying some of the differences in the way that patients are receiving and responding to care, with adequately evaluating risk adjusting for the disparities in care. The commenters suggested that CMS explore additional social risk factors beyond dual eligibility, such as employment status, homelessness/type of residence, availability of a caretaker, food insecurity, transportation, crime rates, and other social risk factors as appropriate. Due to the complex and detailed nature of the research being undertaken by ASPE, as well as by measure stewards through the quality measure development process, the commenters encouraged CMS to provide more transparency on its efforts to address this issue. The commenters also strongly encouraged CMS to continue working closely with the measure stewards, and other quality organization stakeholders in developing any permanent risk-adjusted reporting changes as determined appropriate. Lastly,

commenters encouraged CMS to include representatives on the Technical Expert Panel from across the wide spectrum of stakeholders that comprise the health care continuum.

Response: We thank the commenters for their support, opinions, and recommendations, and will take them into consideration as we continue our work on these issues.

## 6. Possible New Quality Measure Topics for Future Years

### a. Background

As discussed in sections section I.A.2. of the preambles of the proposed rule and this final rule, we have begun analyzing our programs' measures using the framework we developed for the Meaningful Measures Initiative. We have also discussed future quality measure topics and quality measure domain areas in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50280), the FY 2016 IPPS/LTCH PPS final rule (80 FR4979), the FY 2017 IPPS/LTCH PPS final rule (81 FR 25211), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38421 through 38423). Specifically, we discussed public comment and suggestions for measure topics addressing: (1) making care affordable; (2) communication and care coordination; and (3) working with communities to promote best practices of healthy living. In addition, in the FY 2018 IPPS/LTCH PPS final rule, we welcomed public comment and specific suggestions for measure topics that we should consider for future rulemaking, including considerations related to risk adjustment and the inclusion of social risk factors in risk adjustment for any individual performance measures.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20507 through 20508), we again sought public comment on the types of measure topics we should consider for future rulemaking. We also sought public comment on two measures for potential future inclusion in the PCHQR Program:

- Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer (NQF #1790); and
- Shared Decision Making Process (NQF #2962).

We discuss these measures and measurement topic areas in more detail below.

b. Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer (NQF #1790)

The Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer (NQF #1790) measure is an outcome measure. It assesses postoperative complications and operative mortality, which are important negative outcomes associated with lung cancer resection surgery. Specifically, the measure assesses the number of patients 18 years of age or older undergoing elective lung resection (Open or video-assisted thoracoscopic surgery (VATS) wedge resection, segmentectomy, lobectomy, bilobectomy, sleeve lobectomy, pneumonectomy) for lung cancer who developed one of the listed postoperative complications described in the measure's specifications.<sup>390</sup> The lung cancer resection risk model utilized in this measure identifies predictors of these outcomes, including patient age, smoking status, comorbid medical conditions, and other

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<sup>390</sup> Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer (NQF #1790) Measure Specifications. Available at: [http://www.qualityforum.org/Projects/Cancer\\_Endorsement\\_Maintenance\\_2011.aspx#t=2&s=&p=3%7C](http://www.qualityforum.org/Projects/Cancer_Endorsement_Maintenance_2011.aspx#t=2&s=&p=3%7C).

patient characteristics, as well as operative approach and the extent of pulmonary resection. Knowledge of these predictors informs clinical decision-making by enabling physicians and patients to understand the associations between individual patient characteristics and outcomes. Further, with continuous feedback of performance data over time, knowledge of these predictors and their relationship with patient outcomes also will foster quality improvement.

This measure aligns with recent initiatives to incorporate more outcome measures in quality reporting programs. This measure also aligns with the Promote Effective Prevention and Treatment of Chronic Disease domain of our Meaningful Measures Initiative,<sup>391</sup> and would fill an existing gap area of risk-adjusted mortality measures in the PCHQR Program. This measure has not yet been reviewed by the MAP. Additional information on this measure is available at:

[http://www.qualityforum.org/Projects/Cancer\\_Endorsement\\_Maintenance\\_2011.aspx#t=2&s=&p=3%7C](http://www.qualityforum.org/Projects/Cancer_Endorsement_Maintenance_2011.aspx#t=2&s=&p=3%7C), under the “Candidate Consensus Standards Review: Phase-1” section.

We requested public comment on the possible inclusion of this measure in future years of the program.

Comment: A few commenters supported the possible inclusion of the Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer measure in future years of the PCHQR Program, but expressed concern regarding certain aspects of the measure. The commenters noted that not all cancer hospitals perform inpatient

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<sup>391</sup> Overview of CMS “Meaningful Measures” Initiative available at: <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-releases/2017-Press-releases-items/2017-10-30.html>.

thoracic surgeries and, of those that do, not all participate in the Society of Thoracic Surgeons (STS) General Thoracic Surgery program. Further, participation in the STS program incurs cost and considerable burden given that the measure is registry-based and requires manual abstraction of cases. The commenters urged CMS to consider whether this measure can be collected in a less burdensome manner before incorporating it into the PCHQR Program. In addition, the commenters requested that CMS work to clarify the data collection and submission process, measure calculation process, and any appropriate risk adjustment. Commenters also expressed concern about the omission of small volume centers in the model that STS used to validate the risk adjusted morbidity and mortality for lung cancer resection metric as able to sort out high performing vs. acceptable vs. low performing centers. Lastly, the commenters noted that the data used for developing the models are older and may not fit as well with current figures.

Response: We thank the commenters for their support. We will collaborate with the measure steward (where appropriate) to ensure that the measure calculation and risk adjustment methodologies are thoroughly outlined, should we decide to move forward with a proposal to adopt this measure in future years of the PCHQR Program. We will also share the concerns related to data sampling continuity, the inclusion of small volume centers, and the impact of the cost and burden of participation in the STS General Thoracic Surgery Program on data extrapolation with the measure's steward.

Comment: One commenter expressed concern over the possible future inclusion of the Risk-Adjusted Morbidity and Mortality for Lung Resection measure. Specifically, the commenter noted that the measure may have negative implications for lung cancer

care. In the absence of a lung cancer risk-adjusted model, the commenter expressed concern that this measure may penalize centers that choose to serve more complex, high-risk patients.

Response: We acknowledge the commenter's concern, and note that this measure does incorporate a lung cancer risk-adjusted model. Specifically, the lung cancer resection risk model utilized in this measure accounts for patient age, smoking status, comorbid medical conditions, and other patient characteristics, as well as operative approach and the extent of pulmonary resection. Additional information on the specifications is available at:

[http://www.qualityforum.org/Projects/Cancer\\_Endorsement\\_Maintenance\\_2011.aspx#t=2&s=&p=3%7C](http://www.qualityforum.org/Projects/Cancer_Endorsement_Maintenance_2011.aspx#t=2&s=&p=3%7C).

We thank the commenters and we will consider their views as we develop future policy regarding the potential inclusion of the Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer (NQF #1790) measure in the PCHQR Program.

c. Shared Decision Making Process (NQF #2962)

The Shared Decision Making Process (NQF #2962) measure is a patient-reported outcome measure. This measure asks patients who have had any of seven preference-sensitive surgical interventions to report on the interactions they had with their providers when the decision was made to have the surgery. Specifically, this measure assesses patient answers to four questions about whether three essential elements of shared decision-making: (1) laying out options; (2) discussing the reasons to have the intervention and not to have the intervention; and (3) asking for patient input—were part

of the patient's interactions with providers when the decision was made to have the procedure. When faced with a medical problem for which there is more than one reasonable approach to treatment or management, shared decision-making means providers should outline for patients that there is a choice to be made, discuss the pros and cons of the available options, and make sure that patients have input into the final decision. The result will be decisions that align better with patient goals, concerns, and preferences.

This measure aligns with recent initiatives to include patient-reported outcomes and experience of care into quality reporting programs, as well as to incorporate more outcome measures generally. This measure also aligns with the Strengthen Person and Family Engagement as Partners in Their Care domain of our Meaningful Measures Initiative,<sup>392</sup> and would fill an existing gap area of care aligned with the person's goals in the PCHQR Program. This measure has not yet been reviewed by the MAP. Additional information on this measure is available at:

<http://www.qualityforum.org/ProjectMeasures.aspx?projectID=80842>.

We requested public comment on the possible inclusion of this measure in future years of the program.

Comment: A few commenters supported the future inclusion of the Shared Decision Making Process measure. The commenters indicated that this measure is essential for cancer patients, as it allows for the opinion of the patient to be a determinant of their care. The commenters were also appreciative of the fact that this measure places

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<sup>392</sup> Ibid.

strong emphasis on the quality of dialogue between physicians and patients. Moreover, the commenters expressed that adoption of this measure would positively impact physician-patient communication, and thereby improve patient care. Lastly, the commenters suggested that CMS consider the need for expanded psychometric testing of the patient-reported outcome (PRO) survey and further specification and validation of the patient-reported outcome performance measure<sup>393</sup> (PRO-PM) for breast and prostate cancer.

Response: We thank the commenters for their support, and will take these comments into consideration should we propose to adopt this measure in the future.

Comment: Some commenters expressed concerns about the Shared Decision Making Process measure. The commenters indicated that the measure may pose significant tracking, reporting, and validation challenges because data collection for this measure would require significant changes to how Electronic Health Records are currently structured. The commenters also expressed concern that, in the absence of tools to validate the fulfillment of this measure, implementing the measure may not result in the practice change it is intended to achieve. The commenters indicated that most of shared decision-making processes associated with lung cancer resection occurs in an outpatient setting, in a clinic, or in a private office, and may not be easily or even accurately attributed to a particular hospital. This has the potential to require redundant record keeping in order to demonstrate auditable compliance with the metric. The commenters also indicated that the description of the Shared Decision Making Process

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<sup>393</sup> National Quality Forum. "Patient-Reported Outcomes Tools & Performance Measures." Accessed on: June 25, 2018.

measure antedates lung cancer screening, which was not included in the data to develop the measure. Lung cancer screening requires a shared decision-making discussion with a health care professional before implementation, which should be considered as this measure is rolled out.

Response: We acknowledge the commenters' concerns. We note that this measure (as currently specified) is not an electronic clinical quality measure (eCQM). Should we propose to include this measure in future years as an eCQM, we will ensure that it is amenable to the existing infrastructure for data capture of eCQMs to avoid any structural or functional challenges. We also recognize the importance of the validity in quality metrics, and will ensure that adequate reliability and validity testing has been conducted, should we move forward with implementing this measure in future program years. Regarding the attribution issue, we note that this measure has been tested on nearly 3,000 patients, across 6 different clinical sites;<sup>394</sup> with most of the usable data coming from the Dartmouth Medical Center,<sup>395</sup> which is comprised of inpatient hospitals as well as outpatient clinical sites. Regarding the consideration of lung cancer screening, we agree that shared decision-making is pertinent in the screening process for this clinical condition. However, we do not believe that the omission of this particular procedure invalidates the measure or undermines its suitability for the PCHQR Program. To be responsive to commenters' concerns, we will communicate with the measure steward

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<sup>394</sup> "Shared Decision Making Process Measure Testing Attachment." Accessed on: June 26, 2018. Available at: <http://www.qualityforum.org/ProjectMeasures.aspx?projectID=80842>.

<sup>395</sup> Ibid.

about the possible addition of lung cancer screening to the list of procedures as a future refinement of the measure.

Comment: A few commenters expressed concern about the essential elements defined within the Shared Decision Making Process measure. Specifically, the commenters indicated that the measure's essential elements (that is, laying out options, discussing the reasons to have the intervention and not to have the intervention, and asking for patient input) are transactional and lack the specificity required to prevent "check-the-box" activity. Further, these essential elements do not go far enough in assessing whether a patient's preferences, goals, and values were integrated into the care decision. Lastly, these essential elements do not address the cost component of the value equation. The commenters expressed concern that the essential elements, as currently specified, are limiting, and as a result, providers will not discuss other options. For example, a cancer patient may want information on prognosis if he or she chooses to not have surgery or whether radiation therapy is an option. The commenters suggested the integration of components that identify whether a patient's preferences, values, and goals were elicited and used to drive the healthcare decision. The commenters also suggested that this measure should require condition- or procedure-specific questions.

Response: We believe that the measure's essential elements are satisfactory as specified. The results for this measure demonstrate that compared to the baseline data, the participating clinical sites showed significant improvement (higher than the current national average<sup>396</sup>), which supports the argument that outcome measures based on

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<sup>396</sup> Ibid.

patient reports are linked to the way that clinical practices are trying to interact with patients. Further, these results convey that the current questions suffice to capture a patient's preferences, values, and goals when deriving a healthcare decision.

Specifically, for the overall scores, the correlations were .50 ( $p < .001$ ) and .38 ( $p = .004$ ) for adjuvant therapy and surgery decisions respectively, and with minimum sample sizes of 25, there was an overall average reliability of .61.<sup>397</sup>

We thank the commenters and we will consider their views related to the inclusion of a question that gauges patients' assessment of cost, and the inclusion of procedure-specific questions as we develop future policy regarding the potential inclusion of the Shared Decision Making Process (NQF #2962) measure in the PCHQR Program.

Comment: A few commenters provided suggested revisions to some of the questions currently utilized in the Shared Decision Making Process measure. The commenters expressed concern with the first two questions. Specifically, the questions include the wording "how much", then offer "a lot" and "some" as response options. The commenters stated that sometimes a treatment plan is very clear and it would not be reasonable to do "a lot" of discussion about why not to do a clearly medically indicated, curative-intent procedure outside the normal discussion of possible adverse outcomes. The commenters requested that the two questions be rewritten as such: "*Were the advantages and disadvantages of the planned procedure and alternative procedures discussed to your satisfaction?*", with a yes/no response option. The commenters also expressed concern with the third and fourth questions. The commenters noted that these

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<sup>397</sup> Ibid.

two questions only establish whether the patient understood that he or she had the option to accept or decline the procedure. To better evaluate whether patients engaged in a discussion that would improve the likelihood that care would align with their goals for treatment, the commenters suggested that the survey might instead ask: *"Did the doctors ask for your input into the decision about whether or not to perform [the intervention]?"* or, *"Did the doctors ask you whether [the intervention] was consistent with your values and goals?"*

Response: We acknowledge the commenters' concerns and we thank them for the suggested wording revisions for the specified questions. We will share these suggestions with the measure steward for consideration during the next endorsement maintenance review of this measure with NQF.

Comment: One commenter stated that patients should have the opportunity to engage in a shared-decision making process with their provider, other health care professionals, and loved ones. Because treatment decisions are highly personalized, the commenter asked that CMS include a measure that assesses whether or not providers encourage patients to use shared decision-making tools to develop a set of personalized questions based on what each individual patient values most.

Response: We thank the commenter for its recommendation and will consider the impact of using additional decision-making tools (that is, training modules or toolkits for specialty or primary care) in tandem with the Shared Decision Making Process measure as we develop future policy regarding the potential inclusion of the measure in the PCHQR Program.

We thank the commenters and we will consider their views as we develop future policy regarding the potential inclusion of the Shared Decision Making Process (NQF #2962) measure in the PCHQR Program.

d. Future Measurement Topic Areas

As discussed in section I.A.2. of the preambles of the proposed rule and this final rule, we intend to review and assess the quality measures that we collect and score in our quality programs. As a part of the review process, we are continually evaluating the existing PCHQR measures portfolio and identifying gap areas for future measure adoption and/or development. In tandem with this portfolio evaluation, we have conducted a measure environmental scan. We believe that staying abreast of the cancer measurement environment and staying in communication with the cancer measure development community are vital to ensure that the PCHQR Program measure portfolio remains aligned with current CMS and HHS goals. As a part of our efforts to include a comprehensive set of cancer measures in the PCHQR Program, we are currently assessing whether we should redefine the scope of new quality metrics we implement in the PCHQR Program in future years. Specifically, we are trying to determine whether the PCHQR Program would most benefit from the inclusion of more quality measures that examine general cancer care (that is, outcome measures that assess cancer care) or more measures that examine cancer-specific clinical conditions (such as prostate cancer, esophageal cancer, colon cancer, or uterine cancer).

We welcomed public comment and specific suggestions on the inclusion of quality measures that examine general cancer care versus the inclusion of quality measures that examine cancer-specific clinical conditions in future rulemaking.

Comment: A few commenters expressed support for the development of a balanced scorecard that includes both general cancer care measures and measures that focus on cancer-specific clinical conditions. The commenters encouraged CMS to continue to advance a portfolio of measures for the PCHQR Program that assess both general cancer care and cancer-specific clinical conditions, such as breast, colon, prostate, lung, and other types of cancer. The commenters also suggested that CMS prioritize the inclusion of new measures based on the importance and utility of the information assessed, which will naturally result in a balanced portfolio of both general and specific measures.

Response: We thank the commenters for their support and suggestions.

Comment: One commenter expressed support for the PCHQR Program moving towards general cancer care measures based on its belief that as cancer care is increasingly built around a multi-disciplinary team, a move toward more general measures is appropriate so that more providers can report them. The commenter also stated that implementing specific cancer measures can be challenging due to the need for PCHs to meet the case minimum necessary for meaningful analysis. In addition, the commenter stated that general cancer measures are a better use of the extensive time and effort needed to develop measures because they are more applicable to a larger number of patients, providers and practices, and can be utilized in multiple quality programs.

Response: We thank the commenter for its insight, and will consider the implications associated with measure implementation feasibility as we examine measures for future inclusion into the PCHQR Program measure set.

Comment: One commenter urged CMS to promote the development and adoption of claims-based metrics of survival for major cancer types, with careful attention to attribution and risk-adjustment, in future rulemaking. The development of a reliable, adequately risk-adjusted metric of survival rates by major cancer type would vastly improve the PCHQR Program's ability to provide meaningful, easily understood information to patients seeking high-quality, high-value care.

Response: We thank the commenter for its feedback, and will consider performance measures that assess cancer patient survival rates as we move forward with expanding the PCHQR Program measure set.

Comment: One commenter noted that there remains a gap in measures that are evaluating the patient experience. The commenter encouraged CMS to adopt measures that document whether providers have assessed patients for distress or other measures that comprehensively evaluate the patient experience.

Response: We thank the commenter for its feedback, and will consider performance measures that assess patient experience and engagement as we move forward with expanding the PCHQR Program measure set.

Comment: One commenter encouraged CMS to develop more measures around end-of-life conversations. The commenter noted that because cancer patients who are hospitalized tend to have advanced disease, complications, or a very aggressive cancer, it

is incredibly important that cancer patients are provided with the tools and resources to engage in shared decision-making around end-of-life decisions. The commenter further noted that to ensure that patients receive high-quality, appropriate care throughout the trajectory of their cancer journey, it is essential that they have conversations with their care team and loved ones about what type of care they would like to receive, what they value, and when they would like to transition into hospice or only receive supportive care rather than curative therapy.

Response: We thank the commenter for its feedback. We note that as indicated in section VIII.B.4.c. of the preamble of this final rule, there are currently four measures in the PCHQR measure set that assess end-of-life care. However, we recognize the importance of this type of treatment for cancer patient and will continue to consider the feasibility of implementing additional end-of-life measures as we move forward with expanding the PCHQR Program measure set.

We thank the commenters and we will consider their views as we develop future policy regarding the inclusion of quality measures that examine general cancer care versus the inclusion of quality measures that examine cancer-specific clinical conditions.

#### 7. Maintenance of Technical Specifications for Quality Measures

We maintain technical specifications for the PCHQR Program measures, and we periodically update those specifications. The specifications may be found on the QualityNet website at:

<https://qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228774479863>.

We also refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50281), where we adopted a policy under which we use a subregulatory process to make nonsubstantive updates to measures used for the PCHQR Program.

## 8. Public Display Requirements

### a. Background

Under section 1866(k)(4) of the Act, we are required to establish procedures for making the data submitted under the PCHQR Program available to the public. Such procedures must ensure that a PCH has the opportunity to review the data that are to be made public with respect to the PCH prior to such data being made public. Section 1866(k)(4) of the Act also provides that the Secretary must report quality measures of process, structure, outcome, patients' perspective on care, efficiency, and costs of care that relate to services furnished in such hospitals on the CMS website.

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57191 through 57192), we finalized that although we would continue to use rulemaking to establish what year we would first publicly report data on each measure, we would publish the data as soon as feasible during that year. We also stated that our intent is to make the data available on at least a yearly basis, and that the time period for PCHs to review their data before the data are made public would be approximately 30 days in length. We announce the exact data review and public reporting timeframes on a CMS website and/or on our applicable Listservs.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38422 through 38424), we listed our finalized public display requirements for the FY 2020 program year.

**Previously Finalized Public Display Requirements for the FY 2020 Program Year**

<b>Summary of Previously Finalized Public Display Requirements</b>	
<b>Measures</b>	<b>Public Reporting</b>
<ul style="list-style-type: none"> <li>● Oncology: Radiation Dose Limits to Normal Tissues (NQF #0382)*</li> <li>● Oncology: Plan of Care for Pain – Medical Oncology and Radiation Oncology (NQF #0383)</li> <li>● Oncology: Medical and Radiation - Pain Intensity Quantified (NQF #0384)*</li> <li>● Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients (NQF #0389)*</li> <li>● Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Prostate Cancer Patients (NQF #0390)*</li> <li>● HCAHPS (NQF #0166)</li> </ul>	2016 and subsequent years
<ul style="list-style-type: none"> <li>● CLABSI (NQF #0139)**</li> <li>● CAUTI (NQF #0138)**</li> </ul>	Deferred
<ul style="list-style-type: none"> <li>● External Beam Radiotherapy for Bone Metastases (NQF #1822)</li> </ul>	Beginning when feasible in 2017 and for subsequent years

\*Measure finalized for removal beginning with the FY 2021 program year.

\*\* As discussed in section VIII.B.3.b.(2) of this final rule, we are deferring finalization of our policies regarding future use of the CLABSI and CAUTI measures in the PCHQR Program until the CY 2019 OPSS/ASC final rule. Public reporting of these measures was deferred in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57192).

We recognize the importance of being transparent with stakeholders and keeping them abreast of any changes that arise with the PCHQR Program measure set. As such, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20508 through 20509), we provided a discussion of some recent changes affecting the timetable for the public display of data for specific PCHQR Program measures in the section below.

**b. Deferment of Public Display of Four Measures**

We adopted the Colon and Abdominal Hysterectomy SSI (NQF #0753) measure in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50839 through 50840) and the MRSA

measure (NQF #1716), the CDI measure (NQF #1717) and the HCP measure (NQF #0431) in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49715 through 49718).

At present, all PCHs are reporting Colon and Abdominal Hysterectomy SSI, MRSA, CDI, and HCP data to the NHSN under the PCHQR Program. However, performance data for these measures are new, and do not span a long enough measurement period to draw conclusions about their statistical significance at this point. Specifically, in 2016, the Centers for Disease Control and Prevention (CDC) announced that HAI data reported to NHSN for 2015 will be used as the new baseline, serving as a new “reference point” for comparing progress.<sup>398</sup> These current rebaselining efforts make year-to-year data comparisons inappropriate at this time. However, in FY 2019, we will have 2 years of comparable data to properly assess trends.<sup>399</sup> Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20509), we proposed to delay the public reporting of data for the SSI, MRSA, CDI, and HCP measures until CY 2019.

We invited public comment on our proposal to delay public reporting of these four measures until CY 2019.

Comment: One commenter supported the proposal to defer the public reporting of the SSI, MRSA, CDI, and HCP measures until statistical significance and reliability can be determined.

Response: We thank the commenter for its support.

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<sup>398</sup> Centers for Disease Control and Prevention. “Paving Path Forward: 2015 Rebase line.” Available at: <https://www.cdc.gov/nhsn/2015rebaseline/index.html>.

<sup>399</sup> Rebase line Timeline FAQ Document. Available at: <https://www.cdc.gov/nhsn/pdfs/rebaseline/faq-timeline-rebaseline.pdf>.

Comment: One commenter did not support the proposal to delay the public reporting of the Influenza Vaccination Coverage Among Healthcare Personnel measure. The commenter noted that vaccinating healthcare personnel against influenza has been shown to improve patient safety and reduce disease transmission, which is essential for immunocompromised patients in the cancer hospital setting. Empowering patients and caregivers with the ability to assess cancer hospitals based on this measure could ultimately result in improved outcomes for patients through lower complications.

Response: We thank the commenter for its feedback. We agree that empowering patients and caregivers with the ability to assess cancer hospitals could ultimately result in improved outcomes for patients, however, we want to ensure that the information provided to consumers is adequate and accurate. We reiterate that performance data for these measures are new, and do not span a long enough measurement period to draw conclusions about their statistical significance at this point, however, we will modify our proposal, such that we will provide stakeholders with performance data as soon as practicable.

After consideration of the public comments we received, we are finalizing a modification to our proposal to delay public reporting of data for the SSI, MRSA, CDI, and HCP measures until CY 2019. Instead, we are finalizing that we will provide stakeholders with performance data as soon as practicable (that is, if useable data is available sooner than CY 2019, we will publicly report it on Hospital Compare via the next available Hospital Compare release. We will continue to monitor the progress of the current rebaselining efforts being made by CDC.

c. Clarification of Public Display of External Beam Radiotherapy for Bone Metastases (EBRT) (NQF #1822) Measure

In the FY 2015 IPPS/LTCH PPS final rule (79 FR 50282 through 50283), we finalized that PCHs would begin reporting the External Beam Radiotherapy for Bone Metastases (EBRT) (NQF #1822) measure beginning with January 1, 2015 discharges and for subsequent years. We finalized that PCHs would report this measure to us via a CMS web-based tool on an annual basis (July 1 through August 15 of each respective year). Lastly, we finalized in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57192) that we would begin to display the measure data during CY 2017, and that we would use a CMS website and/or our applicable Listservs to announce the exact timeframe.

We publicly reported data on this measure in December of 2017, and that data can be accessed on *Hospital Compare* at:

<https://www.medicare.gov/hospitalcompare/cancer-measures.html>. We note that this measure is updated on an annual basis, and that new *Hospital Compare* data is published four times each year: April, July, October, and December. As such, given the time necessary to assess the data provided for this measure's annual update, we anticipate an update of EBRT measure data to be available in December of 2018.

d. Summary of Public Display Requirements for the FY 2021 Program Year

Our public display requirements for the FY 2021 program year are shown in the following table:

**Public Display Requirements for the FY 2021 Program Year**

<b>Summary of Newly Finalized Public Display Requirements</b>
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Measures	Public Reporting
<ul style="list-style-type: none"> <li>● HCAHPS (NQF #0166)</li> <li>● Oncology: Plan of Care for Pain – Medical Oncology and Radiation Oncology (NQF #0383)</li> </ul>	2016 and subsequent years
<ul style="list-style-type: none"> <li>● American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure [currently includes SSIs following Colon Surgery and Abdominal Hysterectomy Surgery] (NQF #0753)*</li> <li>● National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> Bacteremia Outcome Measure (NQF #1716)*</li> <li>● National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure (NQF #1717)*</li> <li>● National Healthcare Safety Network (NHSN) Influenza Vaccination Coverage Among Healthcare Personnel (NQF #0431)*</li> <li>● CLABSI (NQF #0139)**</li> <li>● CAUTI (NQF #0138)**</li> </ul>	*Deferred
<ul style="list-style-type: none"> <li>● External Beam Radiotherapy for Bone Metastases (EBRT) (NQF #1822)</li> </ul>	2017 and subsequent years

\*Newly finalized in this FY 2019 IPPS/LTCH PPS final rule.

\*\* As discussed in section VIII.B.3.b.(2) of this final rule, we are deferring finalization of our policies regarding future use of the CLABSI and CAUTI measures in the PCHQR Program until the CY 2019 OPSS/ASC final rule. Public reporting of these measures was deferred in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57192).

9. Form, Manner, and Timing of Data Submission

a. Background

Data submission requirements and deadlines for the PCHQR Program are posted on the QualityNet website at:

<http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228772864228>.

b. Reporting Requirements for the Newly Finalized 30-Day Unplanned Readmissions for Cancer Patients Measure

As further described in section VIII.B.4.b. of the preamble of this final rule, we are finalizing the adoption of a new measure beginning with the FY 2021 program year, the 30-Day Unplanned Readmissions for Cancer Patients measure. This is a claims-based measure, therefore, there will be no separate data submission requirements for PCHs related to this measure as CMS will calculate measure rates using PCH claims data. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20510), we proposed that the data collection period would be from July 1 of the year, three years prior to the program year to June 30 of the year, two years prior to the program year. Therefore, for the FY 2021 program year, we would collect data from October 1, 2018 through September 30, 2019.

We invited public comment on this proposal.

Comment: One commenter supported the proposed timeframe for the reporting of the 30-Day Unplanned Readmissions for Cancer Patients measure.

Response: We thank the commenter for its support.

After consideration of the public comment we received, we are finalizing the proposal to collect data on this measure from October 1, 2018 through September 30, 2019, for the FY 2021 program year.

10. Extraordinary Circumstances Exceptions (ECE) Policy Under the PCHQR Program

In our experience with other quality reporting and performance programs, we have noted occasions when providers have been unable to submit required quality data

due to extraordinary circumstances that are not within their control (for example, natural disasters). We do not wish to increase their burden unduly during these times.

Therefore, in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50848), we finalized our policy that, for the FY 2014 program year and subsequent years, PCHs may request and we may grant exceptions (formerly referred to as waivers)<sup>400</sup> with respect to the reporting of required quality data when extraordinary circumstances beyond the control of the PCH warrant. The PCH may request a reporting extension or a complete exception from the requirement to submit quality data for one or more quarters. In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38424 through 38425), we finalized modifications to the extraordinary circumstances exceptions (ECE) policy to extend the deadline for a PCH to submit a request for an extension or exception from 30 days following the date that the extraordinary circumstance occurred to 90 days following the date that the extraordinary circumstance occurred and to allow CMS to grant an exception or extension due to CMS data system issues which affect data submission. In addition, to ensure transparency and understanding of our process, we have clarified that we will strive to provide our response to an ECE request within 90 days of receipt.

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<sup>400</sup> ECEs were originally referred to as “waivers.” This term was changed to “exceptions” in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50286).

### C. Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

#### 1. Background

The LTCH QRP is authorized by section 1886(m)(5) of the Act, and it applies to all hospitals certified by Medicare as long-term care hospitals (LTCHs). Under the LTCH QRP, the Secretary reduces by 2 percentage points the annual update to the LTCH PPS standard Federal rate for discharges for an LTCH during a fiscal year if the LTCH has not complied with the LTCH QRP requirements specified for that fiscal year. For more detailed information on the requirements we have adopted for the LTCH QRP, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51743 through 51744), the FY 2013 IPPS/LTCH PPS final rule (77 FR 53614), the FY 2014 IPPS/LTCH PPS final rule (78 FR 50853), the FY 2015 IPPS/LTCH PPS final rule (79 FR 50286), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49723 through 49725), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57193), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38425 through 38426).

Although we have historically used the preamble to the IPPS/LTCH PPS proposed and final rules each year to remind stakeholders of all previously finalized program requirements, we have concluded that repeating the same discussion each year is not necessary for every requirement, especially if we have codified it in our regulations. Accordingly, the following discussion is limited as much as possible to a discussion of our proposals, responses to comments submitted on those proposals, and policies we are finalizing for future years of the LTCH QRP, and represents the approach we intend to use in our rulemakings for this program going forward.

Comment: Several commenters supported streamlining the LTCH QRP, specifically CMS' effort to align areas of best practices with other quality reporting programs. Another commenter supported the proposed changes to the LTCH QRP, recognizing that these changes are part of a multi-year process to reform patient assessment and quality reporting across multiple levels of care.

Response: We appreciate the commenters' support.

## 2. General Considerations Used for the Selection of Measures for the LTCH QRP

### a. Background

For a detailed discussion of the considerations we historically used for the selection of LTCH QRP quality, resource use, and other measures, we refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49728).

We received comments related to the IMPACT Act and the availability of data for LTCHs, both of which are summarized and discussed below.

Comment: A few commenters supported the goals and objectives of the IMPACT Act, noting the interdependence of the four post-acute care settings and their respective payment systems and the critical need for sound analysis of data from all levels of care. One commenter supported the delay of the implementation of the IMPACT Act requirements to ensure that measures are valid and valuable.

Commenters also supported the development of standardized patient assessment data elements. One commenter recommended that, as part of the standardized patient assessment data elements that could be incorporated into the post-acute care assessment instruments, CMS streamline adult immunization quality measures across health care

settings. One commenter expressed that CMS communicate and collaborate more with LTCHs and other post-acute care providers on IMPACT Act implementation, encouraging CMS to include LTCHs in the development of standardized patient assessment data elements and all other CMS initiatives related to the implementation of the IMPACT Act. The commenter also noted that CMS should develop and refine measures that are either required by the IMPACT Act or will otherwise facilitate cross-setting measurement and eliminate measures that are not required under the IMPACT Act.

Response: While we did not propose changes to the LTCH QRP's policies on standardized patient assessment data elements, quality measures, or public engagement pertaining to the implementation of the IMPACT Act, we will take these comments into account as we engage in future development of these policies. We refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49723 through 49728) and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38426 through 38433) for additional information on the IMPACT Act and its applicability to LTCHs.

Comment: Some commenters requested that CMS provide opportunity for stakeholders of all post-acute care settings to access aggregate patient assessment data, including LTCH CARE Data Set data, to allow providers to analyze data and to provide meaningful input to CMS, noting that this data is available for SNFs, IRFs, and HHAs, but not, however, for LTCHs.

Response: We acknowledge the commenters' requests to make the LTCH CARE Data Set data publicly available for research purposes. We intend to make the data available as soon as feasible.

b. Accounting for Social Risk Factors in the LTCH QRP

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428 through 38429), we discussed the importance of improving beneficiary outcomes including reducing health disparities. We also discussed our commitment to ensuring that medically complex patients, as well as those with social risk factors, receive excellent care. We discussed how studies show that social risk factors, such as being near or below the poverty level as determined by HHS, belonging to a racial or ethnic minority group, or living with a disability, can be associated with poor health outcomes and how some of this disparity is related to the quality of health care.<sup>401</sup> Among our core objectives, we aim to improve health outcomes, attain health equity for all beneficiaries, and ensure that complex patients as well as those with social risk factors receive excellent care. Within this context, reports by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the National Academy of Medicine have examined the influence of social risk factors in our value-based purchasing programs.<sup>402</sup> As we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38404), ASPE's report to Congress, which was

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<sup>401</sup> See, for example United States Department of Health and Human Services. "Healthy People 2020: Disparities. 2014." Available at: <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>; or National Academies of Sciences, Engineering, and Medicine. Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors. Washington, DC: National Academies of Sciences, Engineering, and Medicine 2016.

<sup>402</sup> Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), "Report to Congress: Social Risk Factors and Performance Under Medicare's Value-Based Purchasing Programs." December 2016. Available at: <https://aspe.hhs.gov/pdf-report/report-congress-social-risk-factors-and-performance-under-medicare-value-based-purchasing-programs>.

required by the IMPACT Act, found that, in the context of value-based purchasing programs, dual eligibility was the most powerful predictor of poor health care outcomes among those social risk factors that they examined and tested. ASPE is continuing to examine this issue in its second report required by the IMPACT Act, which is due to Congress in the fall of 2019. In addition, as we noted in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428), the National Quality Forum (NQF) undertook a 2-year trial period in which certain new measures and measures undergoing maintenance review have been assessed to determine if risk adjustment for social risk factors is appropriate for these measures.<sup>403</sup> The trial period ended in April 2017 and a final report is available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx). The trial concluded that “measures with a conceptual basis for adjustment generally did not demonstrate an empirical relationship” between social risk factors and the outcomes measured. This discrepancy may be explained in part by the methods used for adjustment and the limited availability of robust data on social risk factors. NQF has extended the socioeconomic status (SES) trial,<sup>404</sup> allowing further examination of social risk factors in outcome measures.

In the FY 2018/CY 2018 proposed rules for our quality reporting and value-based purchasing programs, we solicited feedback on which social risk factors provide the most valuable information to stakeholders and the methodology for illuminating differences in outcomes rates among patient groups within a provider that would also allow for a comparison of those differences, or disparities, across providers. Feedback we received

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<sup>403</sup> Available at: [http://www.qualityforum.org/SES\\_Trial\\_Period.aspx](http://www.qualityforum.org/SES_Trial_Period.aspx).

<sup>404</sup> Available at: <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=86357>.

across our quality reporting programs included encouraging CMS: to explore whether factors that could be used to stratify or risk adjust the measures (beyond dual eligibility); to consider the full range of differences in patient backgrounds that might affect outcomes; to explore risk adjustment approaches; and to offer careful consideration of what type of information display would be most useful to the public.

We also sought public comment on confidential reporting and future public reporting of some of our measures stratified by patient dual eligibility. In general, commenters noted that stratified measures could serve as tools for hospitals to identify gaps in outcomes for different groups of patients, improve the quality of health care for all patients, and empower consumers to make informed decisions about health care. Commenters encouraged us to stratify measures by other social risk factors such as age, income, and educational attainment. With regard to value-based purchasing programs, commenters also cautioned CMS to balance fair and equitable payment while avoiding payment penalties that mask health disparities or discouraging the provision of care to more medically complex patients. Commenters also noted that value-based payment program measure selection, domain weighting, performance scoring, and payment methodology must account for social risk.

As a next step, we are considering options to improve health disparities among patient groups within and across hospitals by increasing the transparency of disparities as shown by quality measures. We also are considering how this work applies to other CMS quality programs in the future. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38403 through 38409) for more details, where we discuss the potential

stratification of certain Hospital IQR Program outcome measures. Furthermore, we continue to consider options to address equity and disparities in our value-based purchasing programs.

We plan to continue working with ASPE, the public, and other key stakeholders on this important issue to identify policy solutions that achieve the goals of attaining health equity for all beneficiaries and minimizing unintended consequences.

Comment: Many commenters supported the continued evaluation of social risk factors for the LTCH QRP measures, specifically for displaying stratification by social risk factors, expressed willingness to support efforts with CMS or NQF on this issue, and requested that attribution be addressed in technical specifications.

Response: We thank the commenters for their comments and will take these comments into account as we further consider how to appropriately account for social risk factors in the LTCH QRP. We also refer the reader to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38428 through 38429), where we discussed displaying stratification by social risk factors and other related issues.

### 3. New Measure Removal Factor for Previously Adopted LTCH QRP Measures

As a part of our Meaningful Measures Initiative, discussed in section I.A.2. of the preambles of the proposed rule and this final rule, we strive to put patients first, ensuring that they, along with their clinicians, are empowered to make decisions about their own healthcare using data-driven information that is increasingly aligned with a parsimonious set of meaningful quality measures. We began reviewing the LTCH QRP's measures in accordance with the Meaningful Measures Initiative, and we are working to identify how

to move the LTCH QRP forward in the least burdensome manner possible, while continuing to incentivize improvement in the quality of care provided to patients.

Specifically, we believe the goals of the LTCH QRP and the measures used in the program cover most of the Meaningful Measures Initiative priorities, including making care safer, strengthening person and family engagement, promoting coordination of care, promoting effective prevention and treatment, and making care affordable.

We also evaluated the appropriateness and completeness of the LTCH QRP's current measure removal factors. We have previously finalized that we would use notice and comment rulemaking to remove measures from the LTCH QRP based on the following factors:<sup>405</sup>

- Factor 1. Measure performance among LTCHs is so high and unvarying that meaningful distinctions in improvements in performance can no longer be made.
- Factor 2. Performance or improvement on a measure does not result in better patient outcomes.
- Factor 3. A measure does not align with current clinical guidelines or practice.
- Factor 4. A more broadly applicable measure (across settings, populations, or conditions) for the particular topic is available.
- Factor 5. A measure that is more proximal in time to desired patient outcomes for the particular topic is available.
- Factor 6. A measure that is more strongly associated with desired patient outcomes for the particular topic is available.

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<sup>405</sup> We refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53614 through 53615) for more information on the factors we consider for removing measures.

- Factor 7. Collection or public reporting of a measure leads to negative unintended consequences other than patient harm.

We continue to believe that these measure removal factors are appropriate for use in the LTCH QRP. However, even if one or more of the measure removal factors applies, we may nonetheless choose to retain the measure for certain specified reasons. Examples of such instances could include when a particular measure addresses a gap in quality that is so significant that removing the measure could, in turn, result in poor quality, or in the event that a given measure is statutorily required. We note further that, consistent with other quality reporting programs, we apply these factors on a case-by-case basis.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20511 through 20512), we proposed to adopt an additional factor to consider when evaluating potential measures for removal from the LTCH QRP measure set: Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

As we discussed in section I.A.2. of the preambles of the proposed rule and this final rule, with respect to our new Meaningful Measures Initiative, we are engaging in efforts to ensure that the LTCH QRP measure set continues to promote improved health outcomes for beneficiaries while minimizing the overall costs associated with the program. We believe these costs are multi-faceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining the program. We have identified several different types of costs, including, but not limited to: (1) the provider and clinician information collection burden and

burden associated with the submission/reporting of quality measures to CMS; (2) the provider and clinician cost associated with complying with other programmatic requirements; (3) the provider and clinician cost associated with participating in multiple quality programs, and tracking multiple similar or duplicative measures within or across those programs; (4) the cost to CMS associated with the program oversight of the measure including measure maintenance and public display; and (5) the provider and clinician cost associated with compliance with other federal and/or State regulations (if applicable).

For example, it may be needlessly costly and/or of limited benefit to retain or maintain a measure which our analyses show no longer meaningfully supports program objectives (for example, informing beneficiary choice). It may also be costly for health care providers to track the confidential feedback, preview reports, and publicly reported information on a measure where we use the measure in more than one program. CMS may also have to expend unnecessary resources to maintain the specifications for the measure, as well as the tools we need to collect, validate, analyze, and publicly report the measure data. Furthermore, beneficiaries may find it confusing to see public reporting on the same measure in different programs.

When these costs outweigh the evidence supporting the continued use of a measure in the LTCH QRP, we believe it may be appropriate to remove the measure from the program. Although we recognize that one of the main goals of the LTCH QRP is to improve beneficiary outcomes by incentivizing health care providers to focus on specific care issues and making public data related to those issues, we also recognize that those

goals can have limited utility where, for example, the publicly reported data is of limited use because it cannot be easily interpreted by beneficiaries and used to influence their choice of providers. In these cases, removing the measure from the LTCH QRP may better accommodate the costs of program administration and compliance without sacrificing improved health outcomes and beneficiary choice.

We proposed that we would remove measures based on this factor on a case-by-case basis. We might, for example, decide to retain a measure that is burdensome for health care providers to report if we conclude that the benefit to beneficiaries justifies the reporting burden. Our goal is to move the program forward in the least burdensome manner possible, while maintaining a parsimonious set of meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients.

Comment: Many commenters supported the proposal to add measure removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program, in the LTCH QRP. Commenters appreciated the consideration of costs beyond those associated with data collection and submission. One commenter agreed that the burden associated with data collection should be balanced with the value these measures have to providers, patients, and others. Another commenter suggested that CMS also consider the costs associated with tracking performance and resources invested for quality improvement. A few commenters encouraged CMS to continue to apply the measure removal factors to other measures in the LTCH QRP, including those more

recently adopted in the program, to reduce regulatory burden on providers so that they may focus instead on improving patient outcomes.

Response: We appreciate the support and suggestions regarding the addition of this measure removal factor to the LTCH QRP. With respect to considering the costs associated with tracking performance and resources invested for quality improvement, we believe that investing resources in quality improvement is an inherent part of delivering high-quality, patient-centered care and, therefore, is generally not considered a part of the quality reporting program requirements.

Comment: A few commenters noted the existing seven removal factors are sufficient for appropriate measure evaluation.

Response: While we acknowledge that there are seven factors currently adopted that may be used for considering measure removal from the LTCH QRP, we believe the proposed new measure removal factor adds a new criterion that is not captured in the other seven factors. The proposed new measure removal factor will help advance the goals of the Meaningful Measures Initiative, which aims to improve outcomes for patients, their families, and health care providers while reducing burden and costs for clinicians and providers.

Comment: One commenter questioned the process involved with Factor 1, or “topped-out” measures, and requested clarity on the process and timeline for determining whether a measure is “topped out.”

Response: While we did not use Factor 1 as justification for removing any LTCH QRP measures in the proposed rule, we acknowledge the commenter’s request for

clarification about the process and timeline for this measure removal factor. In our evaluation of LTCH QRP measures, we look at measure performance using methodology and a timeline that are appropriate, based on each measure's specifications. If we determine that measure performance is so high and unvarying that meaningful distinctions in improvements in performance can no longer be made, we will detail our process in the proposed rule and solicit public comment after making such a determination.

Comment: Some commenters expressed concern related to proposed Factor 8. A few commenters stated that the measure removal factor only accounts for the cost of reporting without considering the cost to patients, their families, and the Medicare program. The commenters requested more measures and financial incentives to spur higher quality care and hold providers accountable if they fail to prevent errors and infections.

One commenter cautioned that measure removal should not be solely based on associated cost and recommended that CMS implement measures even at a high cost if it benefits patients. Another commenter requested clarification about the methods or criteria used to assess when the measure cost or burden outweighs the benefits of retaining it.

Lastly, one commenter expressed concern that Factor 8 compares the costs with the "use in the program," indicating that the usefulness of the measures should be self-evident and directly relate to the purpose of the program. The commenter believed that the removal of a measure would decrease the ability of that measure to improve

patient care and reduce Medicare costs and, as a result, would reduce the effectiveness of the quality reporting program. The commenter also noted that Factor 8 does not describe a specific method to be used to evaluate the usefulness of a measure or describe how the number of measures kept within the program shall be determined.

Response: We intend to apply measure removal Factor 8 on a case-by-case basis because the costs and benefits associated with each measure are unique to that measure. However, we believe these costs include costs to all stakeholders, including but not limited to, patients, caregivers, providers, CMS, and other entities. We agree with the commenter's observation that for measures that serve beneficiaries, the costs may be outweighed by the benefits, and intend to evaluate measures on a case-by-case basis to achieve this balance.

With regard to the request for clarification about criteria used to assess costs and burden, we provided examples of five different costs that could be considered in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20512). We note that we intend to assess the costs and benefits to all program stakeholders, including but not limited to, those listed above. We intend to be transparent in our assessment of costs and burden for each measure. As described above, there are various considerations of costs and benefits, direct and indirect, financial and otherwise, that we will evaluate when evaluating a measure under removal Factor 8, and we will take into consideration the perspectives of multiple stakeholders. However, because we intend to evaluate each measure on a case-by-case basis, and because each measure has been adopted to fill different needs in

the LTCH QRP, we do not believe it would be meaningful to identify a specific set of assessment criteria to apply to all measures.

Lastly, in response to the comment that the removal of measures would reduce the effectiveness of the LTCH QRP, we do not believe that more measures equate to better care. Retaining a strong measure set that addresses critical issues is one benefit that we would consider in analyzing measures for potential removal from the LTCH QRP measure set. We will continue to monitor and evaluate our programs to identify their benefit with respect to quality of care and patient safety as well as their costs.

After consideration of the public comments we received, we are finalizing our proposal to adopt an additional measure removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program, in the LTCH QRP.

We also proposed to codify both the removal factors we previously finalized for the LTCH QRP, as well as the new the measure removal Factor 8 that we are finalizing in this final rule, at § 412.560(b)(3) of our regulations.

Comment: A few commenters supported the proposal to codify all eight measure removal factors, including the proposed Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing our proposal to codify both the removal factors we previously finalized for the LTCH QRP, as well as the new the measure removal factor that we are finalizing in this final rule, at § 412.560(b)(3) of our regulations. We are also making minor grammatical edits to the

LTCH QRP measure removal factor language to align with the language of other programs.

4. Quality Measures Currently Adopted for the FY 2020 LTCH QRP

The LTCH QRP currently has 19 measures for the FY 2020 program year, which are outlined in the following table:

**Quality Measures Currently Adopted for the FY 2020 LTCH QRP**

Short Name	Measure Name & Data Source
<b>LTCH CARE Data Set</b>	
Pressure Ulcer	Percent of Residents or Patients With Pressure Ulcers That Are New or Worsened (Short Stay) (NQF #0678)*
Pressure Ulcer/Injury	Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury
Patient Influenza Vaccine	Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680)
Application of Falls	Application of Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) (NQF #0674)
Functional Assessment	Percent of Long-Term Care Hospital (LTCH) Patients with an Admission and Discharge Functional Assessment and a Care Plan That Addresses Function (NQF #2631)
Application of Functional Assessment	Application of Percent of Long-Term Care Hospital (LTCH) Patients with an Admission and Discharge Functional Assessment and a Care Plan That Addresses Function (NQF #2631)
Change in Mobility	Functional Outcome Measure: Change in Mobility Among Long-Term Care Hospital (LTCH) Patients Requiring Ventilator Support (NQF #2632)
DRR	Drug Regimen Review Conducted With Follow-Up for Identified Issues- Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)
Compliance with SBT	Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay
Ventilator Liberation	Ventilator Liberation Rate
<b>NHSN</b>	
CAUTI	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138)

Short Name	Measure Name & Data Source
CLABSI	National Healthcare Safety Network (NHSN) Central Line-associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139)
MRSA	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Bacteremia Outcome Measure (NQF #1716)
CDI	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset <i>Clostridium difficile</i> Infection (CDI) Outcome Measure (NQF #1717)
HCP Influenza Vaccine	Influenza Vaccination Coverage among Healthcare Personnel (NQF #0431)
VAE	National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure
<b>Claims-Based</b>	
MSPB LTCH	Medicare Spending Per Beneficiary (MSPB)-Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)
DTC	Discharge to Community-Post Acute Care (PAC) Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)
PPR	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)

\* The measure was replaced with the Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury measure, effective July 1, 2018.

Comment: One commenter suggested that CMS consider adding Kennedy terminal ulcers as an item in the LTCH CARE Data Set in order to differentiate a Kennedy ulcer from a facility-acquired pressure ulcer/injury.

Response: While we did not solicit comments on the items on the LTCH CARE Data Set, we appreciate the commenter’s suggestion for additional pressure ulcer/injury items and will take this into consideration as we continue our evaluation and refinement of pressure ulcer/injury items used to calculate skin integrity quality measures for PAC settings. Kennedy terminal ulcers, which are unavoidable skin breakdown that occur as part of the dying process, are not considered to be pressure ulcers/injuries and are therefore not currently coded on the LTCH CARE Data Set and not included in the

calculation of the skin integrity measure, Percent of Residents or Patients with Pressure Ulcers That Are New or Worsened (Short Stay) (NQF #0678), or the replacement measure, Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury. We will continue to provide training and clarification regarding coding of pressure ulcer/injury items through training events, FAQs, and help desk.

Comment: One commenter requested a more precise definition of the phrase “potential clinically significant medication issues” under the Drug Regimen Review Conducted with Follow-Up for Identified Issues measure. This commenter was concerned that policies in other CMS programs would hinder appropriate prescribing of antipsychotic medications.

Response: While we did not propose any changes to the previously finalized measure, Drug Regimen Review Conducted with Follow-Up for Identified Issues-PAC LTCH QRP, we responded to comments regarding the definition of a clinically significant medication issue in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57219 through 57223), and we refer readers to that detailed discussion. We also refer readers to the LTCH QRP Manual Version 4.0 for more information about coding the drug regimen review data elements, available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/LTCH-Quality-Reporting/LTCH-CARE-Data-Set-and-LTCH-QRP-Manual.html>.

Comment: A few commenters supported maintaining the Influenza Vaccination Coverage Among Healthcare Personnel (NQF #0431) quality measure in the LTCH QRP. A commenter also supported the public reporting of the quality measure.

Response: We appreciate the commenters' support.

Comment: A few commenters expressed views on measures for future consideration for the LTCH QRP. One commenter suggested a measure that addresses mental health. Another commenter encouraged CMS to move forward with the development and adoption of a standardized patient experience survey given CMS' focus on strengthening person and family engagement as part of the Meaningful Measures framework.

Response: While we did not solicit public comment about future measures, we appreciate the input and will take it into consideration in future LTCH QRP measure development.

#### 5. Removal of Three LTCH QRP Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20513 through 20515), we proposed to remove three measures from the LTCH QRP measure set. Beginning with the FY 2020 LTCH QRP, we proposed to remove two measures: (1) National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716); and (2) National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure. We proposed to remove one measure beginning with the FY 2021 LTCH QRP: Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680). We discuss these proposals below.

a. Removal of the National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716)

We proposed to remove the measure, National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716), from the LTCH QRP beginning with the FY 2020 LTCH QRP.

As discussed in section VIII.C.3. of the preambles of the proposed rule and this final rule, one of the main goals of our Meaningful Measures Initiative is to apply a parsimonious set of the most meaningful measures available to track patient outcomes and impact. We currently collect data on two measures of healthcare-associated bacteremia infections in the LTCH QRP: (1) NHSN Central line-associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139); and (2) NHSN Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716).

In our review of these measures used in the LTCH QRP, we believe that it is appropriate to remove the NHSN Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) based on: (1) Factor 6, a measure that is more strongly associated with desired patient outcomes for the particular topic is available; and (2) Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

We believe that the NHSN CLABSI Outcome Measure (NQF #0139) is more strongly associated with the desired patient outcome for bloodstream infections than the NHSN Facility-wide Inpatient Hospital-Onset MRSA Bacteremia Outcome Measure (NQF #1716). Bloodstream infections are serious infections typically causing a prolongation of hospital stay and increased cost and risk of mortality. The NHSN CLABSI Outcome Measure (NQF #0139) assesses the results of the quality of care provided to patients, and it is risk-adjusted to compare the infection rate for a particular location or locations in a hospital with an expected infection rate for those locations (which is calculated using national NHSN data for those locations in a predictive model). The NHSN CLABSI Outcome Measure (NQF #0139) is more strongly associated with the desired patient outcome of better results in the quality of care provided to patients because it covers a wide range of blood-stream infections, while the NHSN Facility-wide Inpatient Hospital-Onset MRSA Bacteremia Outcome Measure (NQF #1716) only covers MRSA observed hospital-onset unique blood source MRSA laboratory-identified events. The NHSN CLABSI Outcome Measure (NQF #0139) also captures the MRSA blood-stream events, creating potential duplicative collection and reporting.

We also believe that the costs associated with the NHSN Facility-wide Inpatient Hospital-Onset MRSA Bacteremia Outcome Measure (NQF #1716) outweigh the benefit of its continued use in the LTCH QRP. The NHSN Facility-wide Inpatient Hospital-Onset MRSA Bacteremia Outcome Measure (NQF #1716) was adopted to assess MRSA infections caused by a strain of MRSA bacteremia that has become resistant to antibiotics commonly used to treat MRSA infections. The NHSN Facility-wide Inpatient Hospital-

Onset MRSA Bacteremia Outcome Measure (NQF #1716) and NHSN CLABSI Outcome Measure (NQF #0139) capture the same type of MRSA infection. This overlap results in the data submission on two measures that cover the same quality issue. We believe that this results in redundant efforts on the part of LTCHs that are costly and burdensome. In addition, the maintenance of these two measures in the LTCH QRP is costly for CMS. Lastly, we believe that the removal of the NHSN Facility-wide Inpatient Hospital-Onset MRSA Bacteremia Outcome Measure (NQF #1716) would benefit the public by eliminating the potential confusion of seeing two different measure rates on *LTCH Compare* that capture MRSA bacteremia.

We stated in the proposed rule that if our proposal is finalized, LTCHs would continue to report MRSA bacteremia events associated with central line use as part of the NHSN CLABSI Outcome Measure (NQF #0139), and LTCHs would also report as part of that measure other acquired central line-associated bloodstream infections. As a result, duplication of data submission of the same MRSA bacteremia event for these two measures would be eliminated and only a single bacteremia outcome measure would be publicly reported on *LTCH Compare*.

For these reasons, we proposed to remove the NHSN Facility-wide Inpatient Hospital-onset MRSA Bacteremia Outcome Measure (NQF #1716) from the LTCH QRP beginning with the FY 2020 LTCH QRP under: (1) Factor 6, a measure that is more strongly associated with desired patient outcomes for the particular topic is available; and (2) Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

We stated in the proposed rule that if our proposal is finalized as proposed, LTCHs would no longer be required to submit data on this measure for the purposes of the LTCH QRP beginning with October 1, 2018 admissions and discharges.

Comment: Several commenters, including MedPAC, supported the proposed removal of the National Healthcare Safety Network (NHSN) Facility-Wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) from the LTCH QRP. Commenters noted that this removal aligns with CMS' focus on the Meaningful Measures Initiative and expressed that the removal of this measure would decrease costs and administrative burden for LTCHs, allowing them more time to focus on patient care.

In addition, several commenters agreed that the NHSN CLABSI Outcome Measure (NQF #0139) is more strongly associated with the desired patient outcome for bloodstream infections than the NHSN MRSA Bacteremia Outcome Measure (NQF #1716) and that maintaining both measures in the LTCH QRP would represent duplicative data collection and reporting. Another commenter qualified its support with a recommendation that CMS study the overlap between MRSA and CLABSI since MRSA bacteremias are often, but not always, CLABSIs.

Response: We appreciate the support from MedPAC and other commenters for the proposed removal of the NHSN Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) from the LTCH QRP. We are aligned with the Centers for Disease Control and Prevention's (CDC's) interest in examining the CDC NHSN measures, and the CDC

is considering further study on the overlap of bacteremias within the MRSA and CLABSI measures.

Comment: Some commenters expressed concern with the proposed removal of the National Healthcare Safety Network (NHSN) Facility-Wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) from the LTCH QRP.

Some commenters expressed concern that removing this measure would decrease the ability of providers to continually monitor and address critical patient safety issues and the ability of patients and families, employers, and payers to make informed decisions about their health care. These commenters stated that the public reporting of patient safety measures helps focus and strengthen efforts to improve healthcare quality and safety.

Commenters also stated that patient safety should continue to be assessed in a manner which provides minimal interruption to data collection and burden on LTCHs. In addition, several commenters noted that, with such a small measure set, CMS should strive to maintain key outcome measures.

Other commenters believed that the NHSN CLABSI Outcome Measure (NQF #0139), alone, was not sufficient to capture the desired outcome of bloodstream infections, and stated that the two measures on this topic address different issues which are dependent upon different processes for prevention.

Response: We would like to clarify that providers have the ability to continually monitor and address patient safety issues with the continued public reporting of the

NHSN CLABSI Outcome Measure (NQF #0139), which captures MRSA bloodstream events, on *LTCH Compare*, even with the removal of the NHSN Facility-Wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716).

We agree with the commenters that patient safety should continue to be assessed in a manner that provides minimal interruption to data collection and burden on LTCHs. Through the Meaningful Measures Initiative, it is our goal to maximize patient safety with minimal burden on providers. We continue to monitor hospital acquired infections in the LTCH setting through the NHSN Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138), the NHSN Central Line-associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139), and the NHSN Facility-wide Inpatient Hospital-onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717). In addition, we agree with several commenters that CMS should strive to maintain key outcome measures, and we will continually review, evaluate, and amend, if necessary, these measures within our quality programs.

Lastly, we disagree with the commenter who stated that the CLABSI and MRSA measures address different issues which are dependent upon different processes for prevention. We are clarifying that MRSA bacteremia LabID event reporting is only based on the proxy measure of a positive laboratory finding with no clinical consideration. MRSA bacteremia LabID event reporting is different from CLABSI reporting, which is based on specific infection criteria. Since CLABSI reporting is based

on standardized case definitions, there is confidence in the data that can be used to impact prevention efforts as well as increased comparability between clinical settings.

For example, an increased CLABSI standardized infection ratio (SIR) would be viewed as an opportunity for improvement in overall standard of care practices. In addition, the monitoring conducted under CLABSI reporting is not limited to MRSA bloodstream infections and includes all organisms identified in blood culture collection, pathogens and common commensal organisms. Thus, the CLABSI measure data can inform broader preventive programs than the NHSN Facility-wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716).

After consideration of the public comments we received, we are finalizing our proposal to remove the NHSN Facility-wide Inpatient Hospital-onset MRSA Bacteremia Outcome Measure (NQF #1716) from the LTCH QRP beginning with the FY 2020 LTCH QRP. LTCHs will no longer be required to submit data on this measure for the purposes of the LTCH QRP beginning with October 1, 2018 admissions and discharges.

b. Removal of the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure

We proposed to remove the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure from the LTCH QRP beginning with the FY 2020 LTCH QRP based on Factor 6, a measure that is more strongly associated with desired patient outcomes for the particular topic is available.

We finalized the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50301 through 50305) to assess whether LTCHs monitor ventilator use and identify improvements in preventing complications associated with mechanical ventilation. We have also adopted for the LTCH QRP three other assessment-based quality measures on the topic of ventilator support: (1) Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (NQF #2632) (79 FR 50298 through 50301); (2) Compliance with Spontaneous Breathing Trials (SBT) by Day 2 of the LTCH Stay (82 FR 38439 through 38443); and (3) Ventilator Liberation Rate (82 FR 38443 through 38446).

We believe that these three other assessment-based quality measures are more strongly associated with desired patient outcomes than the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure that we proposed to remove. The three assessment-based measures assess activities that reduce the potential for serious complications and other adverse events as a result of mechanical ventilation. Specifically, the Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (NQF #2632) focuses on improvement in functional mobility for patients requiring mechanical ventilation. The Compliance with SBT by Day 2 of the LTCH Stay measure focuses on successfully liberating patients from mechanical ventilation as soon as possible, which reduces the risk associated with events as a result of prolonged ventilator support. The Ventilator Liberation Rate measure assesses whether the patient was fully liberated from mechanical

ventilation at discharge. Together, these three ventilator-related assessment-based quality measures assess positive outcomes and track patient goals of avoiding adverse outcomes associated with mechanical ventilation and successful ventilator weaning.

The inclusion in the LTCH QRP measure set of these three ventilator-related assessment-based measures, which focus on quality of care through promotion of positive outcomes, have reduced poor outcomes associated with the complications of ventilator care, which is the same focus of the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure (for example, worsening oxygenation, infection or inflammation, ventilator-associated pneumonia, or even death). As a result, we do not believe that it is necessary to retain all four of these measures in the LTCH QRP. By retaining the three ventilator-related assessment-based measures but removing the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure, we believe that we can focus on the topic of mechanical ventilation measures that promote positive outcomes while indirectly promoting a reduction in ventilator support complications.

For these reasons, we proposed to remove the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure from the LTCH QRP beginning with the FY 2020 LTCH QRP under Factor 6, the measure that is more strongly associated with desired patient outcomes for the particular topic is available.

We stated in the proposed rule that if our proposal is finalized as proposed, LTCHs would no longer be required to submit data on this measure for the purposes of the LTCH QRP beginning with October 1, 2018 admissions and discharges.

Comment: Several commenters, including MedPAC, supported the proposed removal of the NHSN VAE Outcome Measure from the LTCH QRP. Commenters agreed that this removal aligns with CMS' Meaningful Measures Initiative and the removal of this measure would decrease costs and administrative burden for LTCHs, allowing them more time to focus on patient care. Several commenters agreed that the measure is duplicative of the three ventilator-related assessment-based quality measures and that the NHSN VAE Outcome Measure might not be as strongly associated with the desired patient outcomes as these three measures.

Response: We appreciate the support and suggestions from MedPAC and other commenters for the proposed removal of the NHSN VAE Outcome Measure from the LTCH QRP.

Comment: A few commenters were appreciative of the removal of the NHSN VAE Outcome Measure and agreed that it overlaps unnecessarily with the other ventilator-related measures in the LTCH QRP, but recommended that CMS instead remove the process measure, Compliance with Spontaneous Breathing Trial (SBT) by Day 2 of the LTCH Stay, from the LTCH QRP.

Response: We appreciate the commenters' feedback; however, we disagree with the recommendation to remove the Compliance with SBT by Day 2 of the LTCH Stay measure instead of the NHSN VAE Outcome Measure that we proposed to remove. The Compliance with SBT by Day 2 of the LTCH Stay measure, when taken together with the two other ventilator-related assessment-based quality measures Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring

Ventilator Support (NQF #2632) and Ventilator Liberation Rate, assesses positive outcomes and track patient goals of avoiding adverse outcomes associated with mechanical ventilation and successful liberation off the ventilator.

As we stated in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38439 through 38440), the Compliance with SBT by Day 2 of the LTCH Stay measure is important for encouraging implementation of evidence-based weaning protocols that reduces the risk of negative ventilator-associated outcomes such as ventilator-associated pneumonia.

Comment: Several commenters expressed concern with the proposed removal of the NHSN VAE Outcome Measure from the LTCH QRP. Some commenters were concerned that removing this measure would decrease the ability of providers to continually monitor and address critical patient safety issues, patients and families to make informed decisions about their health care, and employers and purchasers to obtain better value for their contracts and purchasing programs. The commenters stated that public reporting of patient safety measures helps focus and strengthen efforts to improve healthcare quality and safety.

Several commenters stated that patient safety should continue to be assessed in a manner that provides minimal interruption to data collection and burden on LTCHs. In addition, several commenters noted that, with such a small measure set, CMS should strive to maintain key outcome measures. Several commenters also emphasized the importance of the NHSN VAE Outcome Measure for epidemiological tracking, with a few commenters adding that this measure has only been required since January 2016 and that only a baseline has been established. Another commenter advised CMS to monitor

rates of worsening oxygenation, infection, inflammation, and ventilator-associated pneumonia to ensure that the measure's removal does not unintentionally lead to a rising trend in these events. A few commenters stated that preventing VAEs requires different processes than preventing central line infections and thus, should continue to be monitored in addition to the three current ventilator assessment-based quality measures currently in the LTCH QRP.

Response: We acknowledge the concerns raised by the commenters. As we note above, the other three ventilator assessment-based quality measures currently in the LTCH QRP measure set (Functional Outcome Measure: Change in Mobility among Long-Term Care Hospital Patients Requiring Ventilator Support (NQF #2632); Compliance with Spontaneous Breathing Trials (SBT) by Day 2 of the LTCH Stay; and Ventilator Liberation Rate) assess activities that reduce the potential for serious complications and other adverse events to occur as a result of mechanical ventilation. We believe that encouraging implementation of evidence-based weaning protocols, improving mobility, and liberating patients off mechanical ventilation addresses critical patient safety issues, allows patients and families to make informed decisions based on positive outcomes, and strengthens the value of healthcare.

We agree with the commenters that patient safety should continue to be assessed in a manner which provides minimal interruption to data collection and burden on LTCHs. Through the Meaningful Measures Initiative, one of our goals is to ensure that our measures are strongly associated with the desired patient outcomes. We are continuing to monitor hospital acquired infections in the LTCH setting with the NHSN

Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138), the NHSN Central Line-associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139) and the NHSN Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure (NQF #1717). In addition, we agree with several commenters that CMS should strive to maintain key outcome measures, and we will continually review, evaluate, and amend, if necessary, these measures within our quality programs.

We also agree that epidemiological tracking of VAE is important and that providers should be able to continue monitoring events such as worsening oxygenation, infection, inflammation, and ventilator-associated pneumonia to ensure these events will not rise. LTCHs can continue to report VAE data to NHSN on a voluntary basis, as well as use NHSN for their own internal tracking of local VAE incidence.

Data on LTCH QRP measures that are also collected by the CDC for other purposes are reported by LTCHs to the CDC through the NHSN, and the CDC then transmits the relevant data to CMS. Even with the removal of the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure from the LTCH QRP, the CDC will continue to use VAE data in the production of national and State-level SIRs as a way to track progress towards prevention goals. We recognize that preventing VAEs requires different processes than preventing central line infections. However, as noted above, we believe that the other LTCH QRP VAE-related measures assess positive outcomes and track patient goals of avoiding adverse outcomes associated with mechanical ventilation and successful liberation off the ventilator.

After consideration of the public comments we received, we are finalizing our proposal to remove the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure from the LTCH QRP beginning with the FY 2020 LTCH QRP. LTCHs will no longer be required to submit data on this measure for the purposes of the LTCH QRP beginning with October 1, 2018 admissions and discharges.

c. Removal of the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) Measure

We proposed to remove the process measure, Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680), beginning with the FY 2021 LTCH QRP under measure removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

This process measure reports the percentage of stays in which a patient was assessed and appropriately given the influenza vaccine for the most recent influenza vaccination season and was adopted in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53624 through 53627) to assess vaccination rates among older adults with the goal of reducing the incidence of influenza in this population. Specifically, adoption of the measure in the LTCH QRP was intended to act as a safeguard for patients who did not receive vaccinations prior to admission to an LTCH, since many patients receiving care in the LTCH setting are older adults (those 65 years and older) and are considered to be the target population for the influenza vaccination.

In our evaluation of the LTCH QRP measure set, our analysis of this particular measure revealed that for the 2016-2017 influenza season, nearly every patient was assessed by the LTCH upon admission and that less than 0.04 percent of patients were not assessed for the vaccination. Of those assessed, the data show that most patients who could receive the vaccine had already received the vaccine outside of the LTCH facility, prior to admission.

In addition, we have heard from stakeholders that the data collection associated with this measure is administratively costly and burdensome for LTCHs, and that the process of assessing whether vaccination is needed is often a duplicative process for patients who were already screened during their proximal stay at an acute care facility. We believe that removing this measure would reduce provider costs and burden by eliminating duplicative patient assessments across healthcare settings, minimizing data collection and reporting, and avoiding potentially confusing public reporting of other influenza-related quality measures, such as the Influenza Vaccination Coverage Among Healthcare Personnel (NQF #0431) measure.

We recognize that influenza is a major public health issue. However, based on our analysis of the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure, including data showing that most LTCH patients are vaccinated before they are admitted to the LTCH, we believe that LTCH patients will continue to be assessed and immunized when appropriate in the absence of this measure. As a result, removal of this measure

would alleviate the operational costs and burden that LTCHs currently incur with respect to collecting the data necessary to report this measure.

Therefore, we proposed to remove this measure from the LTCH QRP beginning with the FY 2021 LTCH QRP under measure removal Factor 8, the costs associated with a measure outweigh the benefit of its continued use in the program.

We stated in the proposed rule that if our proposal is finalized as proposed, LTCHs would no longer be required to report the data elements necessary to calculate this measure beginning with October 1, 2018<sup>406</sup> admissions and discharges. We stated in the proposed rule that we plan to remove the data elements from the LTCH CARE Data Set as soon as feasible. We also proposed that beginning with October 1, 2018 admissions and discharges, LTCHs should enter a dash (–) for O0250A, O0250B, and O0250C until the next LTCH CARE Data Set is released.

Comment: Several commenters, including MedPAC, supported the proposal to remove the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure from the LTCH QRP. The commenters emphasized that collecting data on this measure is costly, burdensome, and duplicative since many patients admitted to LTCHs are transferred from the acute care setting where influenza vaccinations are already being tracked. Other

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<sup>406</sup> The target period for the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure is the influenza season, which begins July 1 and ends June 30 of the following year. The influenza vaccination season falls within the influenza season of a given year and starts October 1 and ends March 31 of the following year. This measure includes all patients who were in an LTCH at least one day during the influenza vaccination season. The October 1, 2018 date is proposed as the date in which LTCHs would no longer be required to report the data elements necessary to calculate this measure because October 1, 2018 marks the start of the influenza vaccination season for the 2018 – 2019 influenza season.

commenters stated that if providers are successfully meeting the established standards set by CMS, then data collection is an unnecessary process. In addition, the commenters stated that removing the measure will result in less administrative burden without compromising the quality of care and will allow providers to focus on more meaningful measures to promote better health outcomes for patients and to align with the Meaningful Measures Initiative.

Response: We appreciate the support from MedPAC and other commenters for the proposed removal of the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure from the LTCH QRP.

Comment: Several commenters did not support the removal of the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure from the LTCH QRP. Commenters were concerned with consequences related to patient care, suggesting that the benefits of the measure far outweigh the costs of retaining the measure. One commenter stated that the high performance of the measure is a clear indicator of the success of the measure and continuing to track immunizations should be a priority because patients in LTCHs are susceptible to the acquisition and spread of infectious diseases. Another commenter suggested that an outbreak is more likely to occur and would be costlier than the burden of reporting the measure. Another commenter noted that confusion between the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure

and the Influenza Vaccination Coverage Among Healthcare Personnel (NQF #0431) measure is unlikely and should not be used as a rationale to remove the measure.

Response: We recognize that assessing and appropriately vaccinating patients is an important component of the care process, and the vaccination of the majority of patients before admission to LTCHs protects against the spread of infectious disease. Our analysis has shown that most patients admitted to LTCHs are admitted from an acute-care setting where influenza vaccinations are being tracked, which is why we believe that collecting and reporting data on this measure would be duplicative. Further, high performance of the measure across LTCHs is positive, which makes assessing variations in provider performance difficult.

We strive to align with the Meaningful Measures Initiative by prioritizing measures most vital to improving patient outcomes and focusing on issues that are most meaningful to patients and their families. We considered feedback from subject matter experts who have noted the potential for confusion between the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) and the Influenza Vaccination Coverage Among Healthcare Personnel (NQF #0431) measures. Removal of measures will ultimately ease provider burden and allow LTCHs to devote more time to provide efficient and effective care to improve patient outcomes.

After consideration of the public comments we received, we are finalizing our proposal to remove the Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680) measure

from the LTCH QRP, beginning with the FY 2021 LTCH QRP. LTCHs will no longer be required to report the data elements necessary to calculate this measure beginning with October 1, 2018 admissions and discharges.

#### 6. IMPACT Act Implementation Update

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38449), we stated that we intended to specify two measures that would satisfy the domain of accurately communicating the existence and provision of the transfer of health information and care preferences under section 1899B(c)(1)(E) of the Act no later than October 1, 2018, and intended to propose to adopt them for the FY 2021 LTCH QRP with data collection beginning on or about April 1, 2019.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20515), we stated that as a result of the input provided during a public comment period between November 10, 2016 and December 11, 2016, input provided by a technical expert panel (TEP), and pilot measure testing conducted in 2017, we are engaging in continued development work on these two measures, including supplementary measure testing and providing the public with an opportunity for comment in 2018. We stated that we would reconvene a TEP for these measures in mid-2018 which occurred in April 2018. We stated that we now intend to specify the measures under section 1899B(c)(1)(E) of the Act no later than October 1, 2019 and intend to propose to adopt the measures for the FY 2022 LTCH QRP, with data collection beginning with April 1, 2020 admissions and discharges. For more information on the pilot testing, we refer readers to:

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post->

[Acute-Care-Quality-Initiatives/IMPACT-Act-of-2014/IMPACT-Act-Downloads-and-Videos.html](#).

We did not receive any public comments regarding this IMPACT Act implementation update.

#### 7. Form, Manner, and Timing of Data Submission Under the LTCH QRP

Under our current policy, LTCHs report data on LTCH QRP assessment-based measures and standardized patient assessment data by reporting the designated data elements for each applicable patient on the LTCH CARE Data Set patient assessment instrument and then submitting the completed instruments to CMS using the Quality Improvement and Evaluation System (QIES) Assessment and Submission Processing (ASAP) system. Data on LTCH QRP measures that are also collected by the CDC for other purposes are reported by LTCHs to the CDC through the NHSN, and the CDC then transmits the relevant data to CMS. We refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38454 through 38456) for the data collection and submission timeframes that we finalized for the LTCH QRP.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20515), we sought input on whether we should move the implementation date of any new version of the LTCH CARE Data Set from the usual release date of April to October in the future.

Comment: Some commenters supported moving the implementation date of the LTCH CARE Data Set from April to October. One commenter supported the proposal as long as significant changes are noted in proposed rulemaking and CMS provides additional time to prepare and comply with new reporting requirements. Another

commenter had no position in support of or against the concept of moving the implementation date of a new LTCH CARE Data Set from April to October. Another commenter encouraged CMS to keep the LTCH CARE Data Set update in April as it would allow for changes or comments to be included in the proposed rule.

Response: We appreciate the commenters' input as we determine whether to propose moving the implementation date of the LTCH CARE Data Set from April to October. We would like to clarify that in proposing any updates to the LTCH CARE Data Set, the implementation date of the new version of the LTCH CARE Data Set would not occur until the following year at the earliest. For example, if we propose this change in April 2019, then the implementation of the new version of the LTCH CARE Data Set would not occur until October 1, 2020 at the earliest, as opposed to April 1, 2020. This would give LTCHs an additional 6 months (April-October) to update their systems so that they can comply with new reporting requirements.

#### 8. Changes to the LTCH QRP Reconsideration Requirements

Section 412.560(d)(1) of our regulations states that CMS will send an LTCH written notification of a decision of noncompliance with the measures data and standardized patient assessment data reporting requirements for a particular fiscal year. It also states that CMS will use the QIES ASAP system to provide notification of noncompliance to the LTCH.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20515), we proposed to revise § 412.560(d)(1) to expand the methods by which we would notify an LTCH of noncompliance with the LTCH QRP requirements for a program year. Revised

§ 412.560(d)(1) would state that we would notify LTCHs of noncompliance with the LTCH QRP requirements via a letter sent through at least one of the following notification methods: the QIES ASAP system, the United States Postal Service, or via an e-mail from the Medicare Administrative Contractor (MAC). We believe this change will address feedback from providers who requested additional methods for notification.

We also proposed to revise § 412.560(d)(3) to clarify that we will notify LTCHs, in writing, of our final decision regarding any reconsideration request using the same notification process.

Comment: Many commenters supported the efforts by CMS to provide more methods of communication for notifying LTCHs of LTCH QRP noncompliance and reconsideration decisions. The commenters requested additional details about the timelines and logistics of these methods of notification, such as how providers should specify the recipients of notifications from the MAC. Another commenter recommended that CMS work with providers to develop a formal notification protocol and, at a minimum, clarify how the proposal will affect current notification procedures before finalizing the proposal.

In addition, some commenters expressed concerns that multiple notification methods and lack of specificity would cause confusion, add uncertainty, and cause delays in the notification process. One commenter suggested that CMS revise the process so that: (1) LTCHs can designate one person at the hospital or within the hospital organization to receive these notices, and (2) LTCHs can choose one method of notification from CMS out of the three options.

Response: We thank commenters for their support. We will use at least one method of notification, and providers will be notified regarding the specific method of communication that we will use via the LTCH QRP Reconsideration and Exception & Extension website at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/LTCH-Quality-Reporting/LTCH-Quality-Reporting-Reconsideration-and-Exception-and-Extension.html> and announcements via the PAC listserv. The announcements will be posted annually following the May 15<sup>th</sup> data submission deadline prior to the distribution of the initial notices of noncompliance determination in late spring/early summer. Messaging will include the method of communication for the notices of noncompliance, instructions for sending a reconsideration request, and the final deadline for submitting the request. This policy would be effective October 1, 2018.

In response to the concerns regarding the multiple notification methods, it is our intent that the announcements posted on our website and sent via the PAC listserv will alleviate any confusion regarding noncompliance decisions and the reconsideration process. With regard to the comment about specifying the recipients of notifications for a specific facility, our notifications are sent to the point of contact on file in the QIES database. This information is populated via the Automated Survey Processing Environment (ASPEN) system. It is the responsibility of the facility to ensure that this information is up-to-date. For information regarding how to update provider information in QIES, we refer providers to: <https://www.cms.gov/Medicare/Quality-Initiatives->

[Patient-Assessment-Instruments/LTCH-Quality-Reporting/Downloads/How-to-Update-LTCH-Demographic-Data-1-4-18-Final.pdf](#).

After consideration of the public comments we received, we are finalizing our proposal to revise § 412.560(d)(1) of our regulations to state that we will notify LTCHs of noncompliance with the LTCH QRP via a notification sent through at least one of the following methods: the QIES ASAP system, the United States Postal Service, or via an e-mail from the MAC. We are also finalizing our proposal to revise § 412.560(d)(3) of our regulations to clarify that we will notify LTCHs, in writing, of our final decision regarding any reconsideration request using the same notification process.

D. Changes to the Medicare and Medicaid EHR Incentive Programs (now referred to as the Medicare and Medicaid Promoting Interoperability Programs)

1. Background and Summaries of Final Policies Included in This Final Rule

a. Background

The HITECH Act (Title IV of Division B of the ARRA, together with Title XIII of Division A of the ARRA) authorizes incentive payments under Medicare and Medicaid for the adoption and meaningful use of certified electronic health record technology (CEHRT). Incentive payments under Medicare are available to eligible hospitals and CAHs for certain payment years (as authorized under sections 1886(n) and 1814(l) of the Act, respectively) if they successfully demonstrate meaningful use of CEHRT, which includes reporting on clinical quality measures (CQMs or eCQMs) using CEHRT. Incentive payments are available to Medicare Advantage (MA) organizations under section 1853(m)(3) of the Act for certain affiliated hospitals that meaningfully use CEHRT.

Sections 1886(b)(3)(B)(ix) and 1814(l)(4) of the Act also establish downward payment adjustments under Medicare, beginning with FY 2015, for eligible hospitals and CAHs that do not successfully demonstrate meaningful use of CEHRT for certain associated reporting periods. Section 1853(m)(4) of the Act establishes a negative payment adjustment to the monthly prospective payments of a qualifying MA organization if its affiliated eligible hospitals are not meaningful users of CEHRT, beginning in 2015. Section 1903(a)(3)(F)(i) of the Act establishes 100 percent Federal financial participation (FFP) to States for providing incentive payments to eligible

Medicaid providers (described in section 1903(t)(2) of the Act) to adopt, implement, upgrade and meaningfully use CEHRT.

b. Summaries of Final Policies included in this Final Rule

In this final rule, we are adopting final policies based on proposals in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20515 through 20544) to continue advancement of CEHRT utilization, focusing on burden reduction, interoperability and patient access to their health information.

For the reasons discussed in section VIII.D.4. of the preamble of this final rule, we are finalizing an EHR reporting period of a minimum of any continuous 90-day period in CY 2019 and 2020 for new and returning participants attesting to CMS or their State Medicaid agency.

For the reasons discussed in sections VIII.D.5. and VIII.D.6. of the preamble of this final rule, we are finalizing with modification the proposed performance-based scoring methodology, which consists of a smaller set of objectives including e-Prescribing, Health Information Exchange, Provider to Patient Exchange and Public Health and Clinical Data Exchange. We are finalizing the Query of PDMP measure as proposed.

We are finalizing the Verify Opioid Treatment Agreement measure as optional in CY 2019 and CY 2020, with the ability to earn 5 bonus points per year. In addition, eligible hospitals and CAHs must earn a minimum total score of 50 points in order to satisfy the requirement to report on the objectives and measures of meaningful use, which

is one of the requirements for an eligible hospital or CAH to be considered a meaningful EHR user and earn an incentive payment and/or avoid a Medicare payment reduction.

For the reasons discussed in section VIII.D.6. of the preamble of this final rule, we are finalizing the new measures Query of PDMP, Verify Opioid Treatment Agreement, and Support Electronic Referral Loops by Receiving and Incorporating Health Information. In addition, we are finalizing the removal of the Coordination of Care Through Patient Engagement objective and its associated measures Secure Messaging, View, Download or Transmit, and Patient Generated Health Data as well as the measures Request/Accept Summary of Care, Clinical Information Reconciliation and Patient-Specific Education. Finally, we are renaming measures within the Health Information Exchange objective. These changes include changing the name from Send a Summary of Care to Support Electronic Referral Loops by Sending Health Information and renaming the Public Health and Clinical Data Registry Reporting objective to Public Health and Clinical Data Exchange objective with the requirement to report on any two measures of the eligible hospital or CAH's choice. In addition, we are renaming the Patient Electronic Access to Health Information objective to Provider to Patient Exchange objective, and renaming the remaining measure, Provide Patient Access to Provide Patients Electronic Access to Their Health Information. We are also finalizing the removal of the exclusion criteria from all of the Stage 3 measures retained except for the measures associated with the Electronic Prescribing objective, Public Health and Clinical Data Exchange objective and the new measure, Support Electronic Referral Loops by Receiving and Incorporating Health Information.

For reasons discussed in section VIII.D.9. of the preamble of this final rule, we are finalizing the removal of certain CQMs beginning with the reporting period in CY 2020 as well as the CY 2019 reporting requirements as proposed to align the CQM reporting requirements for the Promoting Interoperability Programs with the Hospital IQR Program.

For reasons discussed in sections VIII.D.10. and VIII.D.11. of the preamble of this final rule, we are finalizing the proposed codification of policies for subsection (d) Puerto Rico hospitals and amending our regulations under Parts 412 and 495 such that the provisions that apply to eligible hospitals would include subsection (d) Puerto Rico hospitals unless otherwise indicated.

For reasons discussed in section VIII.D.12. of the preamble of this final rule, we are finalizing the \$500,000 prior approval threshold for contracts and RFPs by amending §§ 495.324(b)(2) and (3) and 495.324(d). We are also finalizing the deadlines for enhanced FFP under the Medicaid Promoting Interoperability Programs,

We also note that we received many comments that were unrelated to the Promoting Interoperability Programs or otherwise outside the scope of the proposed rule, and we have not responded to these comments in this final rule. These comments included requirements specific to the Merit-based Incentive Payment System (MIPS), regulation pertaining to vendors, information blocking clarification, functionality requirements for application programming interfaces (APIs), the 2015 Edition of CEHRT and issuance of Medicaid incentive payments in CY 2021. We thank all the commenters for their suggestions and feedback on the Promoting Interoperability Programs.

## 2. Renaming the EHR Incentive Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20516), we proposed scoring and measurement policies to move beyond the three stages of meaningful use to a new phase of EHR measurement with an increased focus on interoperability and improving patient access to health information. To better reflect this focus, we have changed the name of the Medicare and Medicaid EHR Incentive Programs to the Promoting Interoperability (PI) Programs, and the new name applies for Medicare fee-for-service, Medicare Advantage, and Medicaid. We believe this change will help highlight the enhanced goals of the program and better contextualize the program changes discussed in the following sections. We also noted that the former name, Medicare and Medicaid EHR Incentive Programs, does not adequately reflect the current status of the programs, as the incentive payments under Medicare generally have ended (with the exception of subsection (d) Puerto Rico hospitals as discussed in section VIII.D.10. of the preambles of the proposed rule and this final rule) and will end under Medicaid in 2021.

## 3. Certification Requirements Beginning in 2019

Beginning with the EHR reporting period in CY 2019, participants in the Promoting Interoperability Programs are required to use the 2015 Edition of CEHRT pursuant to the definition of CEHRT under § 495.4. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20516 through 20517), we did not propose to change this policy, and we continue to believe it is appropriate to require the use of 2015 Edition CEHRT beginning in CY 2019. In reviewing the state of health information technology, it is clear

the 2014 Edition certification criteria are out of date and insufficient for provider needs in the evolving health IT industry. In addition, we indicated it would be beneficial to health IT developers and health care providers to move to more up-to-date standards and functions that better support interoperable exchange of health information and improve clinical workflows.

Eligible hospitals and CAHs will see a reduction in burden through relief from being required to certify to a legacy system, and can use the 2015 Edition to better streamline workflows and utilize more comprehensive functions to meet patient safety goals and improve care coordination across the continuum. Maintaining only one edition of certification requirements would also reduce the burden for health IT developers as well as ONC-authorized testing laboratories and certification bodies because they would no longer have to support two, increasingly distant sets of requirements.

One of the major improvements in the 2015 Edition is the API functionality. API functionality supports health care providers and patient electronic access to health information, contributes to quality improvement, and offers greater interoperability between systems.

The 2015 Edition also includes certification criterion specifying a core set of data that health care providers have noted are critical to interoperable exchange and can be exchanged across a wide variety of other settings and use cases, known as the Common Clinical Data Set (C-CDS) (80 FR 62603). The US Core Data for Interoperability (USCDI) builds off the Common Clinical Data Set definition adopted for the 2015 Edition of certified health IT and referenced in the EHR Incentive Program, for instance

as the data which must be included in a summary care record. The USCDI aims to support the goals set forth in the 21st Century Cures Act by specifying a common set of data classes that are required for interoperable exchange and identifying a predictable, transparent, and collaborative process for achieving those goals. The USCDI is referenced by the Draft Trusted Exchange Framework,<sup>407</sup> which is intended to enable HINs and Qualified HINs to securely exchange electronic health information in support of a range of permitted purposes, including treatment, payment, operations, individual access, public health, and benefits determination.

We also note that the Provide Patients Electronic Access to Their Health Information measure's technical requirements are updated in the 2015 Edition and support health care providers' interest in providing patients with access to their data in a manner that is helpful to the patient and aligns with the API requirement in the Promoting Interoperability Program. This includes a new function that supports patient access to their health information through email transmission to any third party the patient chooses and through a second encrypted method of transmission.

In working with ONC we were able to estimate the percentage of eligible clinicians, eligible hospitals and CAHs that have 2015 Edition CEHRT available to them based on vendor readiness and information, and it appears that the transition from the 2014 Edition to the 2015 Edition is on schedule for the EHR reporting period in CY 2019.

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<sup>407</sup> <https://www.healthit.gov/sites/default/files/draft-trusted-exchange-framework.pdf>.

We continue to recognize there is a burden associated with development and deployment of new technology, but we believe requiring use of the most recent version of CEHRT is important in ensuring health care providers use technology that has improved interoperability features and up-to-date standards to collect relevant patient health information. The 2015 Edition includes key updates to functions and standards that support improved interoperability and clinical effectiveness through the use of health IT.

We received many comments regarding the requirement to use the 2015 Edition of CEHRT beginning in 2019. As we stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20516), we were not proposing to change the requirement. Because the requirement was not a subject of this rulemaking, we are not responding to the comments we received, although we will consider them to inform our future policy making in this subject area.

#### 4. Revisions to the EHR Reporting Period in 2019 and 2020

For the reasons discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20517 through 20518), we proposed that the EHR reporting periods in 2019 and 2020 for new and returning participants attesting to CMS or their State Medicaid agency would be a minimum of any continuous 90-day period within each of the respective calendar years. Eligible professionals (EPs) that attest to a State for the State's Medicaid Promoting Interoperability Program and eligible hospitals and CAHs attesting to CMS or the State's Medicaid Promoting Interoperability Program would attest to meaningful use of CEHRT for an EHR reporting period of a minimum of any continuous 90-day period

from January 1, 2019 through December 31, 2019 and from January 1, 2020 through December 31, 2020, respectively.

We proposed corresponding changes to the definition of “EHR reporting period” and “EHR reporting period for a payment adjustment year” at 42 CFR 495.4.

Comment: The majority of commenters strongly supported CMS’ proposal to use a 90-day EHR reporting period in 2019 and 2020 in order to maximize the time available to implement and roll out system revisions.

Response: We appreciate the commenters’ support of a 90-day EHR reporting period in 2019 and 2020 and believe this will reduce the burden on health care providers, EHR developers and vendors by allowing sufficient time for system upgrades, testing and implementation of the 2015 Edition of CEHRT functionalities and adjustment to the new scoring methodology, objectives and measures that we are finalizing in section VIII.D.5 and VIII.D.6.

Comment: Multiple commenters requested clarification on whether the 2015 Edition of CEHRT has to be in place by January 1, 2019 for the 2019 reporting year.

Response: For the Promoting Interoperability Programs, the 2015 Edition of CEHRT must be implemented for an EHR reporting period in CY 2019, which will be a minimum of 90 days as established in this final rule. It does not need to be implemented on January 1, 2019.

Comment: A few commenters requested a 90-day EHR reporting period in 2021 for both the objectives and measures and CQMs.

Response: We believe it is premature to establish policy beyond CY 2020 and decline to extend the 90-day EHR reporting period beyond CY 2020. We are finalizing the EHR reporting period specific to CYs 2019 and 2020 in order to provide the additional flexibility for vendors and health care providers that are in the process of implementing the 2015 Edition of CEHRT for an EHR reporting period beginning in CY 2019, reduce burden and allow eligible hospitals and CAHs to adjust to the new scoring and reporting methodology.

After consideration of the public comments we received, we are finalizing as proposed that the EHR reporting period is a minimum of any continuous 90-day period in CY 2019 and 2020 for new and returning participants in the Promoting Interoperability Programs attesting to CMS or their State Medicaid agency. Eligible professionals, eligible hospitals, and CAHs may select an EHR reporting period of a minimum of any continuous 90-day period in CY 2019 from January 1, 2019 through December 31, 2019 and in CY 2020 from January 1, 2020 through December 31, 2020.

The applicable incentive payment year and payment adjustment years for the EHR reporting period in 2019 and 2020, as well as the deadlines for attestation and other related program requirements, will remain the same as established in prior rulemaking.

We are finalizing as proposed the corresponding changes to the definition of “EHR reporting period” and “EHR reporting period for a payment adjustment year” at 42 CFR 495.4.

## 5. Scoring Methodology for Eligible Hospitals and CAHs Attesting Under the Medicare Promoting Interoperability Program

### a. Background

As we considered the future direction of EHR reporting for the Promoting Interoperability Program, we considered how to increase the focus of EHR reporting on interoperability and sharing data with patients. We also considered the history of the program stages, as well as the increased flexibility provided by Pub. L. 115-123, the Bipartisan Budget Act of 2018. We refer readers to section VIII.D.5. of the preamble of the proposed rule for a discussion of the program stages. In light of these considerations, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20518 through 20524), we proposed a new performance-based scoring methodology with fewer measures, which would move away from the threshold-based methodology that we currently use. We stated that we believe this change would provide a more flexible, less burdensome structure, allowing eligible hospitals and CAHs to put their focus back on patients. The introduction of a performance-based scoring methodology would continue to encourage hospitals to push themselves on measures that we continue to hear are most applicable to how they deliver care to patients, instead of increasing thresholds on measures that may not be as applicable to an individual hospital. We stated that our goal is to provide increased flexibility to eligible hospitals and CAHs without compromising the integrity of the Medicare Promoting Interoperability Program and enable them to focus more on patient care and health data exchange through interoperability.

We proposed that the performance-based scoring methodology would apply to eligible hospitals and CAHs that submit an attestation to CMS under the Medicare Promoting Interoperability Program beginning with the EHR reporting period in CY 2019. This would include “Medicare-only” eligible hospitals and CAHs (those that are eligible for an incentive payment under Medicare for meaningful use of CEHRT and/or subject to the Medicare payment reduction for failing to demonstrate meaningful use) as well as “dual-eligible” eligible hospitals and CAHs (those that are eligible for an incentive payment under Medicare for meaningful use of CEHRT and/or subject to the Medicare payment reduction for failing to demonstrate meaningful use, and are also eligible to earn a Medicaid incentive payment for meaningful use).

We did not propose to apply the performance-based scoring methodology to “Medicaid-only” eligible hospitals (those that are only eligible to earn a Medicaid incentive payment for meaningful use of CEHRT, and are not eligible for an incentive payment under Medicare for meaningful use and/or subject to the Medicare payment reduction for failing to demonstrate meaningful use) that submit an attestation to their State Medicaid agency for the Medicaid Promoting Interoperability Program. Instead, as discussed in section VIII.D.7. of the preambles of the proposed rule and this final rule, we proposed to give States the option to adopt the performance-based scoring methodology along with the measure proposals discussed in section VIII.D.6. of the preambles of the proposed rule and this final rule for their Medicaid Promoting Interoperability Programs through their State Medicaid HIT Plans.

To accomplish our goal of a performance-based program that reduces burden while promoting interoperability, and taking into account the feedback from our stakeholders, we outlined a proposal using a performance-based scoring methodology in the proposed rule and the following sections of the preamble of this final rule. We believe the proposal promotes interoperability, helps to maintain a focus on patients, reduces burden and provides greater flexibility. The proposal takes an approach that weighs each measure based on performance, and allows eligible hospitals and CAHs to emphasize measures that are most applicable to their care delivery methods, while putting less emphasis on those measures that may be less applicable.

We stated that if we did not finalize a new scoring methodology, we would maintain the current Stage 3 methodology with the same objectives, measures and requirements, but we would include the two new opioid measures proposed in section VIII.D.6.b. of the preamble of the proposed rule, if finalized. The current structure of the Stage 3 objectives and measures under § 495.24(c) for eligible hospitals and CAHs attesting to CMS requires them to report on six objectives that include 16 measures. This structure requires the eligible hospital or CAH to report on all measures and meet the thresholds for most of the measures or claim an exclusion as part of demonstrating meaningful use to avoid the payment adjustment, or to earn an incentive in the case of subsection (d) Puerto Rico hospitals. A general summary overview of the current objectives, measures, and reporting requirements is included in the table below.

**Existing Stage 3 Objectives, Measures and Reporting Requirements for the Medicare EHR Incentive Program for Eligible Hospitals and CAHs**

<b>Objective</b>	<b>Measure (Stage 3 Threshold)</b>	<b>Reporting Requirement</b>
Protect Patient Health Information	<ul style="list-style-type: none"> <li>● Security Risk Analysis (Yes/No)</li> </ul>	Report
Electronic Prescribing	<ul style="list-style-type: none"> <li>● e-Prescribing (&gt;25%)</li> </ul>	Report and meet threshold
Patient Electronic Access to Health Information	<ul style="list-style-type: none"> <li>● Provide Patient Access (&gt;50%)</li> <li>● Patient Specific Education (&gt;10%)</li> </ul>	Report and meet thresholds
Coordination of Care Through Patient Engagement	<ul style="list-style-type: none"> <li>● View, Download or Transmit (at least one patient)</li> <li>● Secure Messaging (&gt;5%)</li> <li>● Patient Generated Health Data (&gt;5%)</li> </ul>	Report all, but only meet the threshold for two
Health Information Exchange	<ul style="list-style-type: none"> <li>● Send a Summary of Care (&gt;10%)</li> <li>● Request/Accept Summary of Care (&gt;10%)</li> <li>● Clinical Information Reconciliation (&gt;50%)</li> </ul>	Report all, but only meet the threshold for two
Public Health and Clinical Data Registry Reporting	Immunization Registry Reporting Syndromic Surveillance Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting	Report Yes/No to Three Registries

b. Performance-Based Scoring Methodology

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20518 through 20524), we proposed a new scoring methodology to include a combination of new measures, as well as the existing Stage 3 measures of the EHR Incentive Program, broken into a smaller set

of four objectives and scored based on performance and participation. We believe this is a significant overhaul of the existing program requirements, which include six objectives, scored on a pass/fail basis. The smaller set of objectives would include e-Prescribing, Health Information Exchange, Provider to Patient Exchange, and Public Health and Clinical Data Exchange. We proposed these objectives to promote specific HHS priorities. We included the e-Prescribing and Health Information Exchange objectives in part to capture what we believe are core goals for the 2015 Edition in line with section 1886(n)(3)(A) of the Act. These core goals promote interoperability between health care providers and health IT systems to support safer, more coordinated care. The Provider to Patient Exchange objective promotes patient awareness and involvement in their health care through the use of APIs, and ensures patients have access to their medical data. Finally, the Public Health and Clinical Data Exchange objective supports the ongoing systematic collection, analysis, and interpretation of data that may be used in the prevention and controlling of disease through the estimation of health status and behavior. The integration of health IT systems into the national network of health data tracking and promotion improves the efficiency, timeliness, and effectiveness of public health surveillance.

Under the proposed scoring methodology, eligible hospitals and CAHs would be required to report certain measures from each of the four objectives, with performance-based scoring occurring at the individual measure-level. Each measure would be scored based on the eligible hospital or CAH's performance for that measure, except for the Public Health and Clinical Data Exchange objective, which requires a

yes/no attestation. Each measure would contribute to the eligible hospital or CAH's total Promoting Interoperability score. The scores for each of the individual measures would be added together to calculate the total Promoting Interoperability score of up to 100 possible points for each eligible hospital or CAH. A total score of 50 points or more would satisfy the requirement to report on the objectives and measures of meaningful use under § 495.24, which is one of the requirements for an eligible hospital or CAH to be considered a meaningful EHR user under § 495.4 and thus earn an incentive payment and/or avoid a Medicare payment reduction. Eligible hospitals and CAHs scoring below 50 points would not be considered meaningful EHR users.

While this approach maintains some of the same requirements of the EHR Incentive Program, we note that we proposed to reduce the overall number of required measures from 16 to 6. We also note that the measures we proposed to include contribute to the goal of increased interoperability and patient access, and no longer require the burdensome predefined thresholds of the EHR Incentive Program, and thus allow new flexibility for eligible hospitals and CAHs in how they are scored. We stated that we believe this proposal allows eligible hospitals and CAHs to achieve high performance in one area where they excel, in order to offset performance in an area where they may need additional improvement. In this manner, we stated that we believe eligible hospitals and CAHs could still be considered meaningful EHR users while continuing to monitor their progress on each of the measures. This approach also helps further promote interoperability by requiring all measures and thus all forms of interoperability across the three objectives.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20520), we also considered an alternative approach in which scoring would occur at the objective level, instead of the individual measure level, and eligible hospitals or CAHs would be required to report on only one measure from each objective to earn a score for that objective. Under this scoring methodology, instead of six required measures, the eligible hospital or CAH's total Promoting Interoperability score would be based on only four measures, one measure from each objective. Each objective would be weighted similarly to how the objectives are weighted in our proposed methodology, and bonus points would be awarded for reporting any additional measures beyond the required four. In the proposed rule, we sought public comment on this alternative approach, and whether additional flexibilities should be considered, such as allowing eligible hospitals and CAHs to select which measures to report on within an objective and how those objectives should be weighted, as well as whether additional scoring approaches or methodologies should be considered.

In our proposed scoring methodology, the Electronic Prescribing objective would contain three measures each weighted differently to reflect their potential availability and applicability to the hospital community. In addition to the existing e-Prescribing measure, we proposed to add two new measures to the Electronic Prescribing objective: Query of Prescription Drug Monitoring Program (PDMP) and Verify Opioid Treatment Agreement. For more information about these two proposed measures, we refer readers to section VIII.D.6.b. of the preambles of the proposed rule and this final rule. The e-Prescribing measure would be required for reporting and weighted at 10 points in

CY 2019, because we believe it would be applicable to most eligible hospitals and CAHs.

In the event that an eligible hospital or CAH meets the criteria and claims the exclusion for the e-Prescribing measure in 2019, the 10 points available for that measure would be redistributed equally among the measures under the Health Information Exchange objective:

- Support Electronic Referral Loops By Sending Health Information Measure (25 points)

- Support Electronic Referral Loops By Receiving and Incorporating Health Information (25 points)

In the proposed rule, we sought public comment on whether this redistribution is appropriate for 2019, or whether the points should be distributed differently.

We stated that the Query of Prescription Drug Monitoring Program (PDMP) and Verify Opioid Treatment Agreement measures would be optional for EHR reporting periods in 2019. These new measures may not be available to all eligible hospitals and CAHs for an EHR reporting period in 2019 as they may not have been fully developed by their health IT vendor, or not fully implemented in time for data capture and reporting. Therefore, we did not propose to require these two new measures in 2019, although eligible hospitals and CAHs may choose to report them and earn up to 5 bonus points for each measure. We proposed to require these measures beginning with the EHR reporting period in 2020, and we sought public comment on this proposal. We note that due to varying State requirements, not all eligible hospitals and CAHs would be able to e-prescribe controlled substances, and thus these measures would not be available to them.

For these reasons, we proposed an exclusion for these two measures beginning with the EHR reporting period in 2020. The exclusion would provide that any eligible hospital or CAH that is unable to report the measure in accordance with applicable law would be excluded from reporting the measure, and the 5 points assigned to that measure would be redistributed to the e-Prescribing measure.

As the two new opioid measures become more broadly available in CEHRT, we proposed each of the three measures within the Electronic Prescribing objective would be worth 5 points beginning in 2020. We note that requiring these two measures would add 10 points to the maximum total score as these measures would no longer be eligible for optional bonus points. To maintain a maximum total score of 100 points, beginning with the EHR reporting period in 2020, we proposed to reweight the e-Prescribing measure from 10 points down to 5 points, and reweight the Provide Patients Electronic Access to Their Health Information measure from 40 points down to 35 points as illustrated in the table below. We proposed that if the eligible hospital or CAH qualifies for the e-Prescribing exclusion and is excluded from reporting all three of the measures associated with the Electronic Prescribing objective as described in section VIII.D.6.b. of the preambles of the proposed rule and this final rule, the 15 points for the Electronic Prescribing objective would be redistributed evenly among the two measures associated with the Health Information Exchange objective and the Provide Patients Electronic Access to Their Health Information measure by adding 5 points to each measure.

In the proposed rule, we sought public comment on the proposed distribution of points beginning with the EHR reporting period in 2020, but we did not receive any comments on this proposal.

After consideration of the public comments we received, we are finalizing our proposed scoring for the Electronic Prescribing objective as proposed but with the modifications discussed at the end of this section VIII.D.5. of the preamble of this final rule. The e-Prescribing measure is finalized as proposed, the Query of PDMP measure is finalized as proposed, and the Verify Opioid Treatment Agreement measure is finalized with modification. We are finalizing the regulation text for the Electronic Prescribing objective scoring at § 495.24(e)(5). In addition, we refer readers to section VIII.D.6.b. of the preamble of this final rule where we discuss our reasons for adopting the Query of PDMP measure as proposed and the Verify Opioid Treatment Agreement measure with modification.

For the Health Information Exchange objective, we proposed to change the name of the existing Send a Summary of Care measure to Support Electronic Referral Loops by Sending Health Information, and proposed a new measure which combines the functionality of the existing Request/Accept Summary of Care and Clinical Information Reconciliation measures into a new measure, Support Electronic Referral Loops by Receiving and Incorporating Health Information. For more information about the proposed measure and measure changes, we refer readers to section VIII.D.6.c. of the preambles of the proposed rule and this final rule. Eligible hospitals and CAHs would be required to report both of these measures, each worth 20 points toward their total

Promoting Interoperability score. These measures are weighted heavily to emphasize the importance of sharing health information through interoperable exchange in an effort to promote care coordination and better patient outcomes. Similar to the two new measures in the Electronic Prescribing objective, the new Support Electronic Referral Loops by Receiving and Incorporating Health Information measure may not be available to all eligible hospitals and CAHs as it may not have been fully developed by their health IT vendor, or not fully implemented in time for an EHR reporting period in 2019. For these reasons, we proposed an exclusion for the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure; any eligible hospital or CAH that is unable to implement the measure for an EHR reporting period in 2019 would be excluded from having to report this measure.

In the event that an eligible hospital or CAH claims an exclusion for the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure, the 20 points would be redistributed to the Support Electronic Referral Loops by Sending Health Information measure, and that measure would then be worth 40 points. In the proposed rule, we sought public comment on whether this redistribution is appropriate, or whether the points should be redistributed to other measures instead.

We did not receive any comments regarding the redistribution of points if an exclusion is claimed for the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure.

We are finalizing our proposed scoring of the Health Information Exchange objective as proposed. We are finalizing the regulation text for the Health Information

Exchange objective and measure scoring at § 495.24(e)(6). In addition, measure specification details can also be found in section VIII.D.6.c. of the preamble of this final rule.

We proposed to weight the one measure in the Provider to Patient Exchange objective, the Provide Patients Electronic Access to Their Health Information measure, at 40 points toward the total Promoting Interoperability score in 2019 and 35 points beginning in 2020. We proposed that this measure would be weighted at 35 points beginning in 2020 to account for the two new opioid measures, which would be worth 5 points each beginning in 2020 as proposed above. We believe this objective and its associated measure get to the core of improved access and exchange of patient data in promoting interoperability and are the crux of the Medicare Promoting Interoperability Program. This exchange of data between health care provider and patient is imperative in order to continue to improve interoperability, data exchange and improved health outcomes. We believe that it is important for patients to have control over their own health information, and through this highly weighted objective, we are aiming to show our dedication to this effort.

Comment: Many commenters supported CMS' proposed weighting of the Provide Patients Electronic Access to Their Health Information measure.

Response: We appreciate the support regarding the weight of this measure. We agree that it is an essential part of the Promoting Interoperability Program and therefore deserves to be highly weighted.

Comment: One commenter suggested that reporting on the Provide Patients Electronic Access to Their Health Information measure should be similar to the Security Risk Analysis measure in that it would be attested to by eligible hospitals and CAHs, but would not be scored.

Response: We thank the commenter for its recommendation. We decline to follow the approach the commenter recommended for the Provide Patients Electronic Access to Their Health Information measure. As we indicated in the proposed rule (83 FR 20516), we were increasing our focus on interoperability and improving patient access to health information. In addition, in the proposed rule (83 FR 20521) we stated that we believe the measure gets to the core of improved access and exchange of patient data in promoting interoperability and is the crux of the Medicare Promoting Interoperability Program, therefore it was heavily weighted due to its importance and focus. We will consider this recommendation in future policy decisions regarding the Promoting Interoperability Program.

Comment: One commenter requested that CMS score the Provide Patients Electronic Access to Their Health Information measure based on the total percentage of their patient population who have electronic access to their medical records, as opposed to the proposed number/denominator performance-based scoring that includes the entire patient population.

Response: We believe that is important that every patient has access to their health information electronically, we also believe that as we are moving forward to improving interoperability the patient should be the main partner in their health. We are

committed to making sure that patients have access to their data electronically and believe this number will increase rapidly over the years. Therefore, we think that it is in the best interest of the Promoting Interoperability Program to include all patients in the denominator in part in order to ensure every patient is provided access and to better understand the amount of patients accessing their data electronically. As a result we will continue with the numerator/denominator performance-based scoring methodology.

After consideration of the comments, we are finalizing with modification the Provider to Patient Exchange objective scoring. The Provide Patients Electronic Access to Their Health Information measure will be worth up to 40 points beginning in CY 2019. We are finalizing the regulation text for this final policy at § 495.24(e)(7). For additional measure information, we refer readers to section VIII.6.d. of the preamble of this final rule.

The measures under the Public Health and Clinical Data Exchange objective are reported using yes/no responses and thus cannot be scored based on performance. We proposed that for this objective, the eligible hospital or CAH would be required to meet this objective in order to receive a score and be considered a meaningful user of EHR. We proposed that the eligible hospital or CAH will be required to report the Syndromic Surveillance Reporting measure and one additional measure of the eligible hospital or CAH's choosing from the following: Immunization Registry Reporting, Electronic Case Reporting, Public Health Registry Reporting, Clinical Data Registry Reporting, Electronic Reportable Laboratory Result Reporting. We proposed an eligible hospital or CAH would receive 10 points for the objective if they attest a "yes" response for both the

Syndromic Surveillance Reporting measure and one additional measure of their choosing. If the eligible hospital or CAH fails to report either one of the two measures required for this objective, the eligible hospital or CAH would receive a score of zero for the objective, and a total score of zero for the Promoting Interoperability Program. We understand that some hospitals may not be able to report the Syndromic Surveillance Reporting measure, or may not be able to report some of the other measures under this objective. Therefore, we proposed to maintain the current exclusions for these measures that were finalized in previous rulemaking. If an eligible hospital or CAH claims an exclusion for one or both measures required for this objective, we proposed the 10 points for this objective would be redistributed to the Provide Patients Electronic Access to Their Health Information measure under the proposed Provider to Patient Exchange objective, making that measure worth 50 points in 2019 and 45 points beginning in 2020. Reporting more than two measures for this objective would not earn the eligible hospital or CAH any additional points. We refer readers to section VIII.D.6.e. of the preambles of the proposed rule and this final rule in regards to the proposals for the current Public Health and Clinical Data Exchange objective and its associated measures.

Comment: A few commenters expressed concern that the Public Health and Clinical Data Exchange measures would be deemphasized if a minimum score of 50 points is required for reporting on the Promoting Interoperability objectives and measures or if the number of measures that must be reported is reduced from three to two.

Response: We appreciate the commenters' feedback. We value the importance of the Public Health and Clinical Data Exchange objective. As we noted in the proposed rule (83 FR 20535 through 20536), stakeholders have indicated that some of the existing active engagement requirements are complicated and confusing and contribute to unintended burden, and our proposals were intended to address these concerns. We disagree that our proposals would deemphasize the Public Health and Clinical Data Exchange measures because eligible hospitals and CAHs would be required to report on (or claim exclusions for) two of these measures. Failure to do so would result in a score of zero for the Promoting Interoperability Program. Requiring the measures to be reported as part of the program confirms the importance of the Public Health and Clinical Data Exchange objective. While it would not be required, eligible hospitals and CAHs may choose to report on additional Public Health and Clinical Data Exchange measures, as they deem appropriate for their daily workflow, although they would not receive additional points for such reporting.

After consideration of the public comments we received, we are finalizing our proposal for scoring the Public Health and Clinical Data Exchange objective as proposed but with the following modification. Instead of requiring eligible hospitals and CAHs to report the Syndromic Surveillance Reporting measure and one additional measure of their choosing, we will allow them to choose both of the measures that they will report. Eligible hospitals and CAHs must select two of the following measures to report on: Syndromic Surveillance Reporting, Immunization Registry Reporting, Electronic Case Reporting, Public Health Registry Reporting, Clinical Data Registry Reporting, and

Electronic Reportable Laboratory Result Reporting. As stated in section VIII.6.e. of the preamble of this final rule, we believe the Syndromic Surveillance Reporting measure should not be required as we understand some hospitals and local jurisdictions are not able to send and receive syndromic surveillance files. In addition, allowing eligible hospitals and CAHs to report on any two measures of their choice promotes flexibility in reporting and allows them to focus on the public health measures that are most relevant to them and their patient populations. For additional measure information, we refer readers to section VIII.6.e. of the preamble of this final rule. We are finalizing the regulation text for this policy at § 495.24(e)(8).

We proposed that the Stage 3 objective, Protect Patient Health Information, and its associated measure, Security Risk Analysis, would remain part of the program, but would no longer be scored as part of the objectives and measures, and would not contribute to the hospital's total score for the objectives and measures. To earn any score in the Promoting Interoperability Program, we proposed eligible hospitals and CAHs would have to attest that they completed the actions included in the Security Risk Analysis measure at some point during the calendar year in which the EHR reporting period occurs. We believe the Security Risk Analysis measure involves critical tasks and note that the Health Insurance Portability and Accountability Act (HIPAA) Security Rule requires covered entities to conduct a risk assessment of their health care organization. This risk assessment will help eligible hospitals and CAHs comply with HIPAA's administrative, physical, and technical safeguards.<sup>408</sup> Therefore, we believe that every

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<sup>408</sup> <https://www.hhs.gov/hipaa/for-professionals/security/guidance/index.html>.

eligible hospital and CAH should already be meeting the requirements for this objective and measure as they are required by HIPAA. We still believe this objective and its associated measure is imperative in ensuring the safe delivery of patient health data. As a result, we would maintain the Security Risk Analysis measure as part of the Promoting Interoperability Program, but we would not score the measure. We sought public comment on whether the Security Risk Analysis measure should remain part of the program as an attestation with no associated score, or whether there should be points associated with this measure.

Comment: A few comments suggested that CMS should assign points for completing the actions of the Security Risk Analysis measure.

Response: As we discussed in the proposed rule (83 FR 20521 through 20522), we do not believe that the Security Risk Analysis measure should be scored because it includes actions required under HIPAA and ensures in part that the eligible hospitals and CAHs are in compliance with administrative, physical, and technical safeguards. We believe no additional points should be awarded because eligible hospitals and CAHs should already have been performing these actions.

Comment: The majority of commenters supported CMS' proposal to require eligible hospitals and CAHs to attest to the completion of the actions of the Security Risk Analysis measure with no associated score in order to be eligible to receive an overall score in the Promoting Interoperability Program as they believed this measure is a requirement in order to safely transmit their patient data and successfully participate in the Promoting Interoperability Program.

Response: As discussed in the preceding response, we agree that this measure should not be scored.

After consideration of the public comments we received, we are finalizing our proposal to require, as a condition of earning a score in the Promoting Interoperability Program, eligible hospitals and CAHs to attest that they completed the actions included in the Security Risk Analysis measure at some point during the calendar year in which the EHR reporting period occurs. We are finalizing the regulation text for this policy at § 495.24(e)(4).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20522), we stated that, similar to how eligible hospitals and CAHs currently submit data, the eligible hospital or CAH would submit their numerator and denominator data for each performance measure, and a yes/no response for each of the two reported measures under the proposed Public Health and Clinical Data Exchange objective. To earn a score greater than zero, in addition to completing the activities required by the Security Risk Analysis measure, the hospital would submit their complete numerator and denominator or yes/no data for all required measures. The numerator and denominator for each performance measure would then translate to a performance rate for that measure and would be applied to the total possible points for that measure. For example, the e-Prescribing measure is worth 10 points. A numerator of 200 and denominator of 250 would yield a performance rate of  $(200/250) = 80$  percent. This 80 percent would be applied to the 10 total points available for the e-Prescribing measure to determine the performance score. A performance rate of 80 percent for the e-Prescribing measure would equate to a measure

score of 8 points (performance rate \* total possible measure points = points awarded toward the total Promoting Interoperability score; 80 percent\*10= 8 points). These calculations and application to the total Promoting Interoperability score, as well as an example of how they would apply are set out in the tables below.

When calculating the performance rates and measure and objective scores, we stated that we would generally round to the nearest whole number. For example, if an eligible hospital or CAH received a score of 8.53 the nearest whole number would be 9. Similarly, if the eligible hospital or CAH received a score of 8.33 the nearest whole number would be 8. In the event that the eligible hospital or CAH receives a performance rate or measure score of less than 0.5, as long as the eligible hospital or CAH reported on at least one patient for a given measure, a score of 1 would be awarded for that measure. We stated that we believe this is the best method for the issues that might arise with the decimal points and is the easiest for computations.

In order to meet statutory requirements and HHS priorities, we stated that the eligible hospital or CAH would need to report on all of the required measures across all objectives in order to earn any score at all. Failure to report the numerator and denominator of any required measure, or reporting a “no” response on a required yes/no response measure, unless an exclusion applies would result in a score of zero.

As stated earlier, an eligible hospital or CAH would need to earn a total Promoting Interoperability score of 50 points or more in order to satisfy the requirement to report on the objectives and measures of meaningful use under § 495.4. Our aim is that every patient has control of and access to their health data, and we believe that the

proposed minimum Promoting Interoperability score is consistent with the current goals of the program that focus on interoperability and providing patients access to their health information. Our vision is for every eligible hospital and CAH to perform at 100 percent for all of the objectives and associated measures. However, we understand the constraints that health care providers face in providing care to patients and seek to provide flexibility for hospitals to create their own score using measures that are best suited to their practice. We also believe it is important to be realistic about what can be achieved. This required score may be adjusted over time as eligible hospitals and CAHs adjust to the new focus and scoring methodology of the Medicare Promoting Interoperability Program. We believe that the 50-point minimum Promoting Interoperability score provides the necessary benchmark to encourage progress in interoperability and also allows us to continue to adjust this benchmark as eligible hospitals and CAHs progress in health IT. We believe that this approach allows eligible hospitals and CAHs to achieve high performance in one area to offset performance in an area where a participant may need additional improvement. In the proposed rule, we sought public comment on whether this minimum score is appropriate, or whether a higher or lower minimum score would be better suited for the first year of this new scoring methodology.

Comment: The majority of commenters supported the proposed 50-point minimum Promoting Interoperability score to satisfy the requirement to report on the objectives and measures of meaningful use under § 495.4. A few commenters requested

a lower minimum score so that eligible hospitals and CAHs would have an opportunity to adjust to the new measures and scoring methodology.

Response: We appreciate the feedback regarding the proposed minimum 50-point score. We decline to lower the minimum score as we continue to believe that 50 points is a necessary benchmark to encourage progress in interoperability and also allows us to continue to adjust this benchmark as eligible hospitals and CAHs progress in health IT. We believe that this approach allows eligible hospitals and CAHs to achieve high performance in one area to offset performance in an area where a participant may need additional improvement.

After consideration of the public comments we received, we are finalizing that for an eligible hospital or CAH to earn a score greater than zero, in addition to completing the activities required by the Security Risk Analysis measure, the hospital must submit their complete numerator and denominator or yes/no data for all required measures. The numerator and denominator for each performance measure will translate to a performance rate for that measure and will be applied to the total possible points for that measure. In addition, we are finalizing that an eligible hospital or CAH must earn a total Promoting Interoperability score of 50 points or more in order to satisfy the requirement to report on the objectives and measures of meaningful use under § 495.24, which is one of the requirements for an eligible hospital or CAH to be considered a meaningful EHR user under § 495.4. We are finalizing regulatory text at § 495.24(e) to reflect this final policy.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20522), we stated that we believe our proposal increases flexibility and helps to ease the burden on eligible

hospitals and CAHs as well as provide additional options for meeting the required objectives. The proposed changes would allow the eligible hospital or CAH to focus on the measures that are more appropriate for the ways in which they deliver care to patients and types of services that they provide and improve on areas in which an eligible hospital or CAH might need some support. We believe that with this new proposed approach we are reducing administrative burden and allowing health care providers to focus more on their patients. The tables below illustrate our proposal for the new scoring methodology and an example of application of the proposed scoring methodology.

**Proposed Performance-Based Scoring Methodology  
for EHR Reporting Periods in 2019**

<b>Objectives</b>	<b>Measures</b>	<b>Maximum Points</b>
e-Prescribing	e-Prescribing	10 points
	<i>Bonus:</i> Query of Prescription Drug Monitoring Program (PDMP)	5 points bonus
	<i>Bonus:</i> Verify Opioid Treatment Agreement	5 points bonus
Health Information Exchange	Support Electronic Referral Loops by Sending Health Information	20 points
	Support Electronic Referral Loops by Receiving and Incorporating Health Information	20 points
Provider to Patient Exchange	Provide Patients Electronic Access to Their Health Information	40 points

Objectives	Measures	Maximum Points
Public Health and Clinical Data Exchange	Syndromic Surveillance Reporting (Required) <u>Choose one or more additional:</u> Syndromic Surveillance Reporting Immunization Registry Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting	10 points

**Proposed Performance-Based Scoring Methodology  
Beginning with EHR Reporting Periods in 2020**

Objectives	Measures	Maximum Points
e-Prescribing	e-Prescribing	5 points
	Query of Prescription Drug Monitoring Program (PDMP)	5 points
	Verify Opioid Treatment Agreement	5 points
Health Information Exchange	Support Electronic Referral Loops by Sending Health Information	20 points
	Support Electronic Referral Loops by Receiving and Incorporating Health Information	20 points
Provider to Patient Exchange	Provide Patients Electronic Access to Their Health Information	35 points
Public Health and Clinical Data Exchange	Syndromic Surveillance Reporting (Required) <u>Choose one or more additional:</u> Immunization Registry Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting	10 points

In the proposed rule, we sought public comment on whether these measures are weighted appropriately, or whether a different weighting distribution, such as equal

distribution across all measures would be better suited to this program and this proposed scoring methodology. We also sought public comment on other scoring methodologies such as the alternative we considered and described earlier in this section.

**Proposed Scoring Methodology Example**

<b>Objective</b>	<b>Measures</b>	<b>Numerator/ Denominator</b>	<b>Performance Rate</b>	<b>Score</b>
e-Prescribing	e-Prescribing	200/250	80%	8 points
	Query of Prescription Drug Monitoring Program	150/175	86%	5 bonus points
	Verify Opioid Treatment Agreement	N/A	N/A	0 points
Health Information Exchange	Support Electronic Referral Loops by Sending Health Information	135/185	73%	15 points
	Support Electronic Referral Loops by Receiving and Incorporating Health Information	145/175	83%	17 points
Provider to Patient Exchange	Provide Patients Electronic Access to Their Health Information	350/500	70%	28 points
Public Health and Clinical Data Exchange	Syndromic Surveillance Reporting (Required)  <u>Choose one or more additional:</u> Immunization Registry Reporting Electronic Case Reporting Public Health Registry Reporting	Yes    Yes	N/A	10 points

Objective	Measures	Numerator/	Performance	Score
	Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting			
<b>Total Score</b>				<b>83 points</b>

We also sought public comment on the feasibility of the new scoring methodology in 2019 and whether eligible hospitals and CAHs would be able to implement the new measures and reporting requirements under this performance-based scoring methodology. In addition, we note that in section VIII.D.8. of the preamble of the proposed rule, we sought public comment on how the Promoting Interoperability Program should evolve in future years regarding the future of the new scoring methodology and related aspects of the program.

We proposed to codify the proposed new scoring methodology in a new paragraph (e) under § 495.24. We also proposed to revise the introductory text of § 495.24 and the heading to paragraph (c) of this section to provide that the criteria specified in proposed new paragraph (e) would be applicable for eligible hospitals and CAHs attesting to CMS for 2019 and subsequent years. Further, we proposed to revise the introductory text of § 495.24 and the heading to paragraph (d) of this section to provide that the criteria specified in paragraph (d) would be applicable for eligible hospitals and CAHs attesting to a State for the Medicaid Promoting Interoperability Program for 2019 and subsequent years.

Comment: Many commenters supported CMS’ proposed scoring methodology in which eligible hospitals and CAHs would be required to report certain measures from

each of the four objectives, with performance-based scoring occurring at the individual measure-level.

Some commenters supported CMS' alternative approach to scoring in which scoring would occur at the objective level, instead of the individual measure level, and eligible hospitals or CAHs would be required to report on only one measure from each objective to earn a score for that objective.

Response: We appreciate the many commenters who supported the proposed scoring methodology. We decline to finalize the alternative approach to scoring. Many commenters suggested that the Public Health and Clinical Data Exchange objective would be deemphasized by reducing the reporting requirement to only one measure. In addition, the other objectives containing more than one measure are the Electronic Prescribing objective and the Health Information Exchange objective. For the Electronic Prescribing objective, we note that both the Query of PDMP and Verify Opioid Treatment Agreement measures are optional for reporting for CY 2019; therefore we believe this objective could require reporting on only one measure as opposed to multiple measures.

Comment: Many commenters supported CMS' proposal to reduce the number of measures to be reported as part of the Promoting Interoperability Program.

Response: We appreciate commenters support of our proposal to reduce the number of measures required to be reported as part of the Promoting Interoperability Program. We believe the reduction in reporting will relieve provider burden through a more flexible, performance-based approach.

Comment: One commenter asked if CMS was removing the Stage 3 requirements and indicated that the timeframe for implementation of the proposed scoring methodology and measure proposals were not adequate considering the historical timeframes needed for upgrades, workflow changes and training.

Response: We did not propose to remove all the Stage 3 requirements; we proposed to change the Stage 3 methodology by removing, adding, changing or maintaining certain objectives and measures. The Query of PDMP measure will be optional for CY 2019. This will allow additional time to develop, test and refine certification criteria and standards and workflows, while taking an aggressive stance to combat the opioid epidemic. While we appreciate the work that needs to be done to fully operationalize this measure, we believe this measure is a critical step in combatting the opioid crisis. Therefore, we are moving forward with requiring the measure beginning in CY 2020. The Verify Opioid Treatment Agreement measure will be optional for an EHR reporting period in 2019 and 2020. The Support Electronic Referral Loops by Receiving and Incorporating Health Information includes exclusion criteria for health care providers that are unable implement this measure for an EHR reporting period in 2019. In addition, we believe that maintaining the same certification criteria and standards currently required for the Stage 3 measures would reduce the time necessary to implement the new measure requirements.

Comment: One commenter requested clarification on whether the required reporting of at least one patient for each measure refers to one patient in the denominator or the numerator.

One commenter disagreed with the scoring methodology of reporting “at least one unique patient” for each proposed measure and recommended that CMS maintain threshold scoring for measures.

Response: As we stated in the proposed rule (83 FR 20522), the eligible hospital or CAH would submit their numerator and denominator data for each performance measure, and a yes/no response for each of the two reported measures under the Public Health and Clinical Data Exchange objective. For measures that include a numerator and denominator, the eligible hospital or CAH must submit a numerator of at least one patient.

We decline to maintain the current threshold based scoring methodology. In changing the scoring methodology to a performance-based, we are allowing hospitals the flexibility to focus on measures that are most applicable to how they delivery care to patients. This flexibility allows eligible hospitals and CAHs the opportunity to push themselves on measures they do well in, while continuing to improve in challenging areas. This provides them the opportunity to reach the minimum total score of 50 points in order to satisfy the requirement to report on the objectives and measures of meaningful use. This is one of the requirements for an eligible hospital or CAH to be considered a meaningful EHR user and earn an incentive payment and/or avoid a Medicare payment reduction.

Comment: One commenter expressed concern about vendors' ability to change the reporting structure to fit the new scoring methodology and costs associated with the changes.

Reponses: The proposed scoring methodology primarily would eliminate or revise existing measures, which should only require consolidation of existing workflows and actions. In addition, the certification criteria and standards remain the same as finalized in the October 16, 2015 final rule titled “2015 Edition Health Information Technology (Health IT) Certification Criteria, 2015 Edition Base Electronic Health Record (EHR) Definition, and ONC Health IT Certification Program Modifications.”

In addition, we proposed two new opioid measures, which we are finalizing as optional for EHR reporting periods in 2019. We are requiring reporting on the Query of PDMP measure in CY 2020. This will allow additional time for vendors to update EHR systems. The Verify Opioid Treatment Agreement measure will remain as optional in CY 2020. For additional information regarding our rationale we refer readers to section VIII.D.6.b. of the preamble of this final rule. The Support Electronic Referral Loops by Receiving and Incorporating Health information combines the functionality of the existing Request/Accept Summary of Care and Clinical Information Reconciliation measures into a new measure, which also includes exclusion criteria for 2019 for eligible hospitals and CAHs that cannot implement the measure in 2019. Lastly, we are finalizing an EHR reporting period of a minimum of any continuous 90-day period in 2019 and 2020 to provide flexibility to health care providers as they are becoming familiar with the new scoring methodology and measures finalized in this rule. We believe that this will allow EHR developers and vendors adequate development time to test and incorporate the new scoring system and measures for deployment and implementation.

Comment: A commenter noted that measures without a numerator and denominator are less burdensome for eligible hospitals and CAHs.

Response: We appreciate the comment and will consider this feedback in the future development of policy for the Promoting Interoperability Program.

Comment: A commenter requested clarification on reporting for eligible hospitals and CAHs with multiple CEHRTs, who switch CEHRT mid-reporting, or merge CEHRTs.

Response: As established in this final rule, the EHR reporting period for eligible hospitals and CAHs is a minimum of any continuous 90-day period in CY 2019 and 2020. Therefore, we would expect hospitals to select and plan their EHR reporting period with respect to the switching and/or merging of their CEHRT. For those who have multiple CEHRTs, the measure specifications remain the same.

#### c. Summary of Final Scoring Methodology

As discussed above, after consideration of the comments we received, we are finalizing our proposed performance-based scoring methodology for eligible hospitals and CAHs that submit an attestation to CMS under the Medicare Promoting Interoperability Program beginning with the EHR reporting period in CY 2019, with modifications, as described below.

For additional measure-specific information, we refer readers to section VIII.D.6. of the preamble of this final rule.

#### ***Promoting Interoperability Score***

We are finalizing that eligible hospitals and CAHs are required to report certain measures from each of the four objectives, with performance-based scoring occurring at the individual measure-level. Each measure is scored based on the eligible hospital or CAH's performance for that measure, except for the measures associated with the Public Health and Clinical Data Exchange objective, which require a yes/no attestation. Each measure will contribute to the eligible hospital or CAH's total Promoting Interoperability score. The scores for each of the individual measures are added together to calculate the total Promoting Interoperability score of up to 100 possible points for each eligible hospital or CAH. A total score of 50 points or more will satisfy the requirement to report on the objectives and measures of meaningful use under § 495.24, which is one of the requirements for an eligible hospital or CAH to be considered a meaningful EHR user under § 495.4 and thus earn an incentive payment and/or avoid a Medicare payment reduction. Eligible hospitals and CAHs scoring below 50 points will not be considered meaningful EHR users.

We are finalizing that for an eligible hospital or CAH to earn a score greater than zero, in addition to completing the actions included in the Security Risk Analysis measure, the hospital must submit their complete numerator and denominator or yes/no data for all required measures. The numerator and denominator for each performance measure will translate to a performance rate for that measure and will be applied to the total possible points for that measure. The eligible hospital or CAH must report on all of the required measures across all of the objectives in order to earn any score at all. Failure to report any required measure, or reporting a "no" response on a yes/no response

measure, unless an exclusion applies will result in a score of zero. We are finalizing the regulation text for this final policy is at § 495.24(e).

#### ***Security Risk Analysis Measure***

We are finalizing our proposal that eligible hospitals and CAHs must attest to having completed the actions included in the Security Risk Analysis measure at some point during the calendar year in which the EHR reporting period occurs. The Security Risk Analysis measure is not scored and does not contribute any points to the hospital's total score for the objectives and measures. We are finalizing the regulation text for this final policy is at § 495.24(e)(4).

#### ***Electronic Prescribing Objective Scoring***

We are finalizing the Electronic Prescribing objective as proposed with the following modifications. The e-Prescribing measure is worth up to 10 points in CY 2019 and up to 5 points in CY 2020. The Query of Prescription Drug Monitoring Program (PDMP) measure is optional in CY 2019 and worth up to 5 bonus points and is a required measure beginning in CY 2020, worth up to 5 points.

The Verify Opioid Treatment Agreement measure is optional in CY 2019 and 2020, and worth up to five bonus points. We intend to reevaluate the status of the Verify Opioid Treatment Agreement measure for subsequent years in future rulemaking.

An exclusion is available for the e-Prescribing measure as described in section VIII.D.6. of the preamble of this final rule. If an exclusion is claimed for the e-Prescribing measure for CY 2019, the 10 points for the e-Prescribing measure will be redistributed equally among the measures associated with the Health Information

Exchange objective. We are finalizing a policy beginning in CY 2020 that an eligible hospital or CAH that qualifies for the e-Prescribing measure exclusion is also excluded from reporting on the Query of PDMP measure.

In addition, separate exclusion criteria are available for the Query of PDMP measure beginning in CY 2020 as described in section VIII.D.6. of the preamble of this final rule. If an exclusion is claimed for the Query of PDMP measure in CY 2020, the points will be equally redistributed among the measures associated with the Health Information Exchange objective. Since the Verify Opioid Treatment Agreement measure is optional and eligible for bonus points, no exclusions are available. We are finalizing our proposal with modification and finalizing § 495.24(e)(5) of the regulation text to reflect this policy.

#### ***Health Information Exchange Objective Scoring***

We are finalizing the Health Information Exchange objective as proposed. The Support Electronic Referral Loops by Sending Health Information measure is worth up to 20 points. There are no exclusions available for the measure. The new measure, Support Electronic Referral Loops by Receiving and Incorporating Health Information, is worth up to 20 points. An exclusion is available for this measure in CY 2019, as described in section VIII.D.6. of the preamble of this final rule. If the exclusion is claimed, the 20 points would be redistributed to the other measure within this objective, the Support Electronic Referral Loops by Sending Health Information measure, which would be worth up to 40 points. We are finalizing the regulation text for this final policy is at § 495.24(e)(6).

***Provider to Patient Exchange Objective Scoring***

We are finalizing the Provider to Patient Exchange objective with modifications. The Provide Patients Electronic Access to Their Health Information measure is worth up to 40 points beginning with the EHR reporting period in CY 2019. No exclusions are available for this measure. We are finalizing the regulation text for this final policy is § 495.24(e)(7).

***Public Health and Clinical Data Exchange Objective Scoring***

We are finalizing the Public Health and Clinical Data Exchange objective as proposed with the following modifications. Eligible hospitals and CAHs must submit a yes/no response for any two measures associated with the Public Health and Clinical Data Exchange objective to earn 10 points for the objective. Failure to report on two measures or submitting a “no” response for a measure will earn a score of zero. Exclusions available for this objective are discussed in section VII.6.e. of the preamble of this final rule. If an exclusion is claimed for one measure, but the eligible hospital or CAH submits a “yes” response for another measure, they would earn the 10 points for the Public Health and Clinical Data Exchange objective. If an eligible hospital or CAH claims exclusions for both measures they select to report on, the 10 points would be redistributed to the Provide Patients Electronic Access to Their Health Information measure under the Provider to Patient Exchange objective. We are finalizing the regulation text for this policy at § 495.24(e)(8).

The tables below reflects the final policy for the objectives, measures, and maximum points available for the EHR reporting periods in CY 2019 and CY 2020.

Please note, the maximum points available do not include points that would be redistributed in the event that an exclusion is claimed:

**Final Performance-Based Scoring Methodology  
for EHR Reporting Periods in CY 2019**

<b>Objectives</b>	<b>Measures</b>	<b>Maximum Points</b>
e-Prescribing	e-Prescribing	10 points
	<i>Bonus:</i> Query of Prescription Drug Monitoring Program (PDMP)	5 points <i>bonus</i>
	<i>Bonus:</i> Verify Opioid Treatment Agreement	5 points <i>bonus</i>
Health Information Exchange	Support Electronic Referral Loops by Sending Health Information	20 points
	Support Electronic Referral Loops by Receiving and Incorporating Health Information	20 points
Provider to Patient Exchange	Provide Patients Electronic Access to Their Health Information	40 points
Public Health and Clinical Data Exchange	<u>Choose any two of the following:</u> Syndromic Surveillance Reporting Immunization Registry Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting	10 points

Note: Security Risk Analysis is retained, but not included as part of the scoring methodology.

**Final Performance-Based Scoring Methodology  
for EHR Reporting Periods in CY 2020**

<b>Objectives</b>	<b>Measures</b>	<b>Maximum Points</b>
e-Prescribing	e-Prescribing	5 points
	Query of Prescription Drug Monitoring Program (PDMP)	5 points
	<i>Bonus:</i> Verify Opioid Treatment Agreement	5 points <i>bonus</i>

<b>Objectives</b>	<b>Measures</b>	<b>Maximum Points</b>
Health Information Exchange	Support Electronic Referral Loops by Sending Health Information	20 points
	Support Electronic Referral Loops by Receiving and Incorporating Health Information	20 points
Provider to Patient Exchange	Provide Patients Electronic Access to Their Health Information	40 points
Public Health and Clinical Data Exchange	<u>Choose any two of the following:</u> Syndromic Surveillance Reporting Immunization Registry Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting	10 points

Note: Security Risk Analysis is retained, but not included as part of the scoring methodology.

We are finalizing the codification of the scoring methodology in new paragraph (e) under § 495.24. We are finalizing the revisions to the introductory text of § 495.24 and the heading to paragraph (c) of this section to provide that the criteria specified in the new paragraph (e) are applicable for eligible hospitals and CAHs attesting to CMS for CY 2019 and subsequent years. Further, we are finalizing the revisions to the introductory text of § 495.24 and the heading to paragraph (d) of this section to provide that the criteria specified in paragraph (d) are applicable for eligible hospitals and CAHs attesting to a State for the Medicaid Promoting Interoperability Program for 2019 and subsequent years.

## 6. Measures for Eligible Hospitals and CAHs Attesting Under the Medicare Promoting Interoperability Program

### a. Measure Summary Overview

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20524 through 20537), we proposed a number of changes to the Stage 3 objectives and measures in connection with the proposed scoring methodology for eligible hospitals and CAHs discussed in the preceding section. Our intent was to ensure the measures better focus on the effective use of health IT, particularly for interoperability, and to address concerns stakeholders have raised through public forums and in public comments related to the perceived burden associated with the current measures in the program.

We proposed three new measures: Query of PDMP; Verify Opioid Treatment Agreement; and Support Electronic Referral Loops by Receiving and Incorporating Health Information.

We proposed to remove the Coordination of Care Through Patient Engagement objective and its three associated measures (Secure Messaging; View, Download or Transmit; and Patient Generated Health Data), as well as the measures Request/Accept Summary of Care, Clinical Information Reconciliation, and Patient-Specific Education.

Finally, we proposed to rename the Send a Summary of Care measure to Support Electronic Referral Loops by Sending Health Information; rename the Public Health and Clinical Data Registry Reporting objective to Public Health and Clinical Data Exchange; rename the Patient Electronic Access to Health Information objective to Provider to

Patient Exchange; and rename the Provide Patient Access measure to Provide Patients Electronic Access to Their Health Information.

We proposed to remove the exclusion criteria from all of the Stage 3 measures we are retaining, except for the measures associated with the Electronic Prescribing objective, Public Health and Clinical Data Exchange objective, and the new measures (Query of PDMP, Verify Opioid Treatment Agreement, and Support Electronic Referral Loops by Receiving and Incorporating Health Information), which would include exclusion criteria.

We proposed the changes as certain measures have proven burdensome to health care providers in ways that were unintended and detract from health care providers' progress on current program priorities, align with broader HHS priorities and/or focus on program priorities related to increasing interoperability, exchange of health care information, patient access to their health information and advanced functions of CEHRT.

We indicated in the proposed rule that the measures would no longer need to be attested to if we finalize the proposal to remove them, although health care providers may still continue to use the standards and functions of those measures based on their preferences and practice needs.

In addition, we sought public comment on a potential new measure Health Information Exchange Across the Care Continuum under the Health Information Exchange objective in which an eligible hospital or CAH would send an electronic summary of care record, or receive and incorporate an electronic summary of care record,

for transitions of care and referrals with a provider of care other than an eligible hospital or CAH including but not limited to long term care facilities, and postacute care providers such as skilled nursing facilities, home health, and behavioral health settings.

We proposed that all of these measure proposals would apply to eligible hospitals and CAHs that submit an attestation to CMS under the Medicare Promoting Interoperability Program beginning with the EHR reporting period in CY 2019, including Medicare-only and dual-eligible eligible hospitals and CAHs. We did not propose to apply these measure proposals to Medicaid-only eligible hospitals that submit an attestation to their State Medicaid agency for the Medicaid Promoting Interoperability Program. Instead, as discussed in section VIII.D.7. of the preambles of the proposed rule and this final rule, we proposed to give States the option to adopt these measure proposals along with the proposed performance-based scoring methodology for the Medicaid Promoting Interoperability Program through their State Medicaid HIT Plans.

We proposed that if we did not finalize a new scoring methodology, we would maintain the current Stage 3 methodology with the same objectives, measures and requirements, but we would include the two new opioid measures, if they are finalized. In addition, we proposed if we did not finalize a new scoring methodology, the proposals to remove objectives and measures as well as proposals to change objective and measure names would no longer be applicable.

Comment: The majority of commenters supported the removal of the patient action measures and overall reduction to the number of measures.

Response: We appreciate the support for the proposal to remove the measures including those requiring patient action, such as View, Download or Transmit, Patient Generated Health Data and Secure Messaging. Previous stakeholder feedback through correspondence, public forums, and listening sessions indicated there is ongoing concern with measures, which require health care providers to be accountable for patient actions. We further understand that there are barriers, which could negatively impact an eligible hospital or CAHs ability to successfully meet a measure requiring patient action, such as a patient's location in remote, rural areas and their inability to access technology such as computers, Internet and/or email. As the issues described contribute to reporting burden and could negatively impact an eligible hospital or CAH's successful participation in the Promoting Interoperability Programs, we agree that removing the patient action measures reduces reporting burden and allows for focus on program goals which include improving interoperability, prioritizing actions completed electronically, use of advanced CEHRT functionalities and patient access to their health information.

Comment: One commenter requested that removed measure functionalities remain in CEHRT moving forward.

Response: We have stated in previous rulemaking (80 FR 62786) that functions and standards related to measures that are no longer required for the Promoting Interoperability Programs could still hold value for some healthcare providers and may be utilized as best suits their practice and the preferences of their patient population. We did not propose to remove the functionality from CEHRT. Removal of measures that are not aligned with the current emphasis of the Medicare Promoting Interoperability Program,

which aim to increase interoperability and leverage the most current health IT functions and standards, is primarily to reduce reporting burden and is not intended to reflect upon the utility of the measure concepts for other purposes, such as providers' internal performance monitoring and improvement activities. Removal of a measure from program requirements does not require providers to remove the measures, associated data, or any functionalities from the health IT that they use.

Comment: A few commenters disagreed with the proposed removal of the exclusion criteria related to broadband availability and the number of transitions or referrals received and patient encounters in which the provider has never previously encountered the patient because they believed it would limit flexibility.

Response: As discussed in the proposed rule (83 FR 20525), we believe that there are valid reasons for the removal of the exclusion criteria. We do not believe the exclusion criteria would impact flexibility as we noted there are currently no counties that have less than 4 Mbps of broadband availability, therefore, the exclusion could not be claimed. Also as we noted during the review of the 2016 Modified Stage 2 attestation data for eligible hospitals and CAHs, no eligible hospital or CAH claimed an exclusion based on broadband availability. In addition, based on our review of the 2016 Modified Stage 2 attestation data, we noted that we did not believe the exclusion criteria specific to transitions or referrals received and patient encounters in which the provider has never previously encountered the patient would be necessary.

Comment: One commenter stated that CMS should include a new exclusion for eligible hospitals and CAHs who cannot attest to a measure due to actions beyond their control.

Response: We decline to implement a new exclusion based on actions beyond the control of health care providers. We note that under our existing policy, eligible hospitals and CAHs may request a significant hardship exception based on extreme and uncontrollable circumstances.

Comment: One commenter requested that CMS retain the exclusion criteria related to broadband availability because the commenter indicated that tele-health services are dependent on the bandwidth of the internet for many applications, and the commenter believes an exclusion for increased bandwidth may be necessary in the future. The commenter noted that certain tele-health applications can require higher minimal speeds than what is currently part of the exclusion criteria.

Response: We decline to retain the exclusion criteria related to broadband availability. As we stated in the proposed rule (83 FR 20525), the Fixed Broadband Deployment Data from Federal Communications Commission (FCC) form 477<sup>409</sup> indicate no counties have less than 4 Mbps of broadband availability, and no eligible hospital or CAH claimed an exclusion based on broadband availability according to the 2016 Modified Stage 2 attestation data. In addition, eligible hospitals and CAHs may request a significant hardship exception in cases of insufficient internet connectivity. We will reevaluate in the future the minimum broadband speed required to provide

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<sup>409</sup> <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>.

tele-health services and determine whether an exclusion would be warranted, but as stated above, we decline to retain the existing exclusion criteria.

Comment: Many commenters supported the proposed changes to the measures including the removal of certain measures and renaming of certain measures.

Response: We thank the commenters for their support and reiterate the proposed changes were meant to remove measures that were burdensome to health care providers in ways that were unintended and detract from health care providers' progress on current program priorities, align with broader HHS priorities and/or focus on program priorities related to increasing interoperability, exchange of health care information, patient access to their health information and advanced functions of CEHRT. We believe the changes more accurately reflect the goals of the program moving forward.

Comment: One commenter requested that CMS not propose additional changes to the objectives and measures that will apply beginning in CY 2019 for at least two years.

Response: We acknowledge that changes we finalize to objectives and measures require additional time and resources for EHR developers, vendors and health care providers to perform necessary updates to CEHRT and workflows, as well as training of staff. We are committed to reducing burden as well as being responsive to the concerns of stakeholders in the Promoting Interoperability Programs and consider many factors prior to proposing changes to the requirements.

Comment: One commenter requested that CMS provide data to eligible hospitals and CAHs on their performance with respect to current program measures before proposing changes.

Response: We will continue to work to promote data transparency and provide data on health care provider participation and performance and post data files for public use on the data and reports web page of the CMS website at:

<https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/DataAndReports.html>.

After consideration of the public comments we received, we are finalizing the changes to the objectives, measures, and exclusion criteria as proposed for eligible hospitals and CAHs that submit an attestation to CMS under the Medicare Promoting Interoperability Program beginning with the EHR reporting period in CY 2019, including Medicare-only and dual-eligible eligible hospitals and CAHs, with the modifications described in the sections below.

We are finalizing amendments to the regulation text at § 495.24(e) and § 495.24(c) to reflect these final policies.

(2) Summary of Finalized Measures Beginning with the EHR Reporting Period in CY 2019

The table below provides a summary of the measures we are finalizing in this final rule.

**Summary of Removed and Final Measures Beginning with the EHR Reporting Period in CY 2019**

<b>Measure Status</b>	<b>Measure</b>
Measures retained from Stage 3 with no modifications*	e-Prescribing Immunization Registry Reporting Syndromic Surveillance Reporting Electronic Case Reporting Public Health Registry Reporting Clinical Data Registry Reporting Electronic Reportable Laboratory Result Reporting
Measures retained from Stage 3 with modifications	Supporting Electronic Referral Loops by Sending Health Information (formerly Send a Summary of Care) Provide Patients Electronic Access to Their Health Information (formerly Provide Patient Access)
Removed measures	Request/Accept Summary of Care Clinical Information Reconciliation Patient-Specific Education Secure Messaging View, Download or Transmit Patient Generated Health Data
New measures	Query of Prescription Drug Monitoring Program (PDMP) Verify Opioid Treatment Agreement Support Electronic Referral Loops by Receiving and Incorporating Health Information

\*Security Risk Analysis is retained, but not included as part of the scoring methodology.

**b. Final Policy for the Electronic Prescribing Objective**

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20526 through 20530), we proposed to add two new measures to the Electronic Prescribing objective under § 495.24(e)(5)(iii) that are based on electronic prescribing for controlled substances (EPCS): Query of PDMP, and Verify Opioid Treatment Agreement, which align with the

broader HHS efforts to increase the use of PDMPs to reduce inappropriate prescriptions, improve patient outcomes and promote more informed prescribing practices. We refer readers to the proposed rule for a detailed discussion of the rationale for these proposals. These measures build upon the meaningful use of CEHRT as well as the security of electronic prescribing of Schedule II controlled substances while preventing diversion. For both measures, we proposed to define opioids as Schedule II controlled substances under 21 CFR 1308.12, as they are recognized as having a high potential for abuse with potential for severe psychological or physical dependence. We also proposed to apply the same policies for the existing e-Prescribing measure under § 495.24(e)(5)(iii) to both the Query of PDMP and Verify Opioid Treatment Agreement measures, including the requirement to use CEHRT as the sole means of creating the prescription and for transmission to the pharmacy. Eligible hospitals and CAHs have the option to include or exclude controlled substances in the e-Prescribing measure denominator as long as they are treated uniformly across patients and all available schedules and in accordance with applicable law (80 FR 62834; 81 FR 77227). However, we indicated because the intent of these two new measures is to improve prescribing practices for controlled substances, eligible hospitals and CAHs would have to include Schedule II opioid prescriptions in the numerator and denominator of the Query of PDMP and Verify Opioid Treatment Agreement measures or claim the applicable exclusion.

In addition, we stated if we finalized the new scoring methodology proposed in the proposed rule, eligible hospitals and CAHs that claim the broader exclusion under the e-Prescribing measure would automatically receive an exclusion for all three of the

measures under the Electronic Prescribing objective; they would not have to also claim exclusions for the other two measures - Query of PDMP and Verify Opioid Treatment Agreement.

However, we stated if we did not finalize the new scoring methodology we proposed in the proposed rule, but we finalized the proposed measures of Query of Prescription Drug Monitoring Program and Verify Opioid Treatment Agreement under the Electronic Prescribing objective, we would continue to apply the Stage 3 requirements finalized in previous rulemaking, and we proposed that eligible hospitals and CAHs would be required to report all three measures under the Electronic Prescribing objective, but would only be required to meet the threshold for the e-Prescribing measure, or claim an exclusion. In addition, if the new scoring methodology we proposed was not finalized, we would retain the existing e-Prescribing measure threshold of 25 percent under § 495.24(c)(2)(ii).

In addition to comments specific to each proposed measure, we received general public comments on both these proposals, which we summarize below.

Comment: Several commenters supported the addition of the Query of PDMP and Verify Opioid Treatment Agreement measures, indicating they are important measures for reducing inappropriate prescriptions and improving patient outcomes.

Response: We thank the commenters for their support and feedback of the proposed new measures under the Electronic Prescribing objective. We believe the measures are important to promoting care coordination between health care providers and reducing inappropriate prescribing practices. We anticipate that integration of PDMPs

into certified EHR technology will become more widespread increasing efficiency with health care provider workflows.

Comment: One commenter requested that CMS work with ONC to harmonize consistency in interoperability requirements, as there are differences in e-Prescribing standards for the 2015 Edition (Script 10.6) and Medicare Advantage final rule (Script 2017071).

Response: We intend to continue collaboration with ONC on the certification and standards criteria. Any proposed revisions to the e-prescribing certification criteria and standards would be included in separate rulemaking.

Comment: A commenter requested clarification on the e-Prescribing measure calculation for 2019 and whether or not hospitals can choose to exclude controlled substances.

Response: We did not propose any changes to the e-Prescribing measure specifications. As we stated in the proposed rule (83 FR 20527), eligible hospitals and CAHs have the option to include or exclude controlled substances in the e-Prescribing measure denominator as long as they are treated uniformly across patients and all available schedules and in accordance with applicable law (80 FR 62834; 81 FR 77227). Eligible hospitals and CAHs reporting on the Query of PDMP and Verify Opioid Treatment Agreement measures would have to include Schedule II opioid prescriptions in the numerator and denominator.

Comment: Many commenters requested that the Query of PDMP and Verify Opioid Treatment Agreement measures remain as optional in CY 2020 with an associated

bonus score as the timeline for implementation is unreasonable especially without certification criteria and standards.

Response: We understand that the Query of PDMP and Verify Opioid Treatment Agreement measures could require eligible hospitals and CAHs to incur additional burden due to workflow changes at the point of care. In addition, we understand eligible hospitals and CAHs that have integrated PDMPs within an EHR may be required to manually calculate the measure, as automated functionality for this measure is not currently supported through certification criteria for Health IT Modules. However, we also stated in the proposed rule that health care providers would have the flexibility to query the PDMP in any manner allowed under their State law (83 FR 20527). This would include using relevant included capabilities of their CEHRT, such as those required by the 2015 Edition electronic prescribing criterion at 45 CFR 170.315(b)(3).

We are finalizing the Query of PDMP measure as proposed. As stated above, we anticipate that integration of PDMPs into certified EHR technology will become more widespread increasing efficiency with health care provider workflows. We believe that requiring the Query of PDMP measure beginning in CY 2020 promotes specific HHS priorities. These priorities include encouraging the increased use of PDMPs to reduce prescription drug abuse and diversion, improving patient outcomes and allowing for more informed prescribing practices. Therefore, we are finalizing this measure as proposed.

Under the final policy we are adopting, the Verify Opioid Treatment Agreement measure will be optional for both CYs 2019 and 2020 with bonus point scoring as finalized in section VIII.D.5. of the preamble of this final rule. We plan to re-evaluate

the status of the Verify Opioid Treatment Agreement measure for an EHR reporting period beginning in CY 2021.

We also believe that extending the optional reporting status into CY 2020 for the Verify Opioid Treatment Agreement measure will give health care providers the additional time required to research and implement methods for verification of such agreements in practice and development of system changes and clinical workflows. We also believe the extension of the optional reporting status will provide additional time for CMS and ONC to review and assess findings from pilot studies as described in the proposed rule (83 FR 20529). We will also consider additional feedback from stakeholders and consider further advancement in developing standards. We further discuss the rationale in section VIII.D.6. of the preamble of this final rule.

Comment: Several commenters stated that certification criteria and standards should be adopted prior to finalization of the Query of PDMP and Verify Opioid Treatment Agreement measures.

Response: We agree that availability of specific mature consensus technical standards relevant to the use cases these measures represent would facilitate health IT developers' ability to offer technical solutions that enable providers both to perform the actions expected by the measures and automatically capture the data needed to calculate both of these measures. We will continue to evaluate the progress in the integration of PDMPs within providers' CEHRT, additional advances toward development of standards and are finalizing exclusion criteria as noted below.

For the Query of PDMP measure, in the proposed rule (83 FR 20528), we proposed that in order to meet the measure, eligible hospitals and CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3) and 170.315(a)(10)(ii), therefore, certification and standards criteria would be associated with this measure. We stated in the proposed rule that there were no current exact certification and standards criteria available for querying a PDMP but believe the use of structured data in CEHRT could support querying through broader use of health IT (83 FR 20528). As previously stated, health care providers would have the flexibility to query the PDMP in any manner allowed as legal and practicable under their State law (83 FR 20527) which we believe provides more flexibility for health care providers to successfully demonstrate meaningful use and be able to report on this measure beginning in CY 2020.

In the proposed rule (83 FR 20530), we proposed that in order to meet the Verify Opioid Treatment Agreement measure eligible hospitals and CAHs must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3), 170.315(a)(10) and 170.205(b)(2), however, there are no current exact standards for identification or exchange of treatment agreements. As we noted in the proposed rule (83 FR 20529 through 20530), there are a variety of standards available within CEHRT that may be able to support the electronic exchange of opioid abuse related treatment data such as the Consolidated Clinical Document Architecture (C-CDA) care plan template.

For these reasons, we are finalizing the Query of PDMP as proposed and the Verify Opioid Treatment Agreement measure as optional for CYs 2019 and CY 2020. For more information, we refer readers to the discussion in section VIII.D.6. of the

preamble of this final rule. In addition, we intend to propose specific certification criteria and standards in separate future rulemaking for the Query of PDMP and the Verify Opioid Treatment Agreement measures.

We are finalizing the definition of opioids as Schedule II controlled substances under 21 CFR 1308.12 as proposed.

We are finalizing the proposal to apply the same policies for the existing e-Prescribing measure under § 495.24(e)(5)(iii) to the Query of PDMP measure and Verify Opioid Treatment Agreement measure, including the requirement to use CEHRT as the sole means of creating the prescription and for transmission to the pharmacy, except that unlike the e-Prescribing measure, eligible hospitals and CAHs must include Schedule II opioid prescriptions in the numerator and denominator of the Query of PDMP and Verify Opioid Treatment Agreement measures if they choose to report on them.

In addition, we are finalizing that an eligible hospital or CAH that qualifies for the e-Prescribing measure exclusion is excluded from reporting on the Query of PDMP measure beginning in CY 2020.

(1) Measure: Query of Prescription Drug Monitoring Program (PDMP)

A PDMP is an electronic database that tracks prescriptions of controlled substances at the State level and play an important role in patient safety by assisting in the identification of patients who have multiple prescriptions for controlled substances or may be misusing or overusing them. Querying the PDMP is important for tracking the prescribed controlled substances and improving prescribing practices. The intent of the

Query of PDMP measure is to build upon the current PDMP initiatives from Federal partners focusing on prescriptions generated and dispensing of opioids.

***Proposed Measure Description:*** For at least one Schedule II opioid electronically prescribed using CEHRT during the EHR reporting period, the eligible hospital or CAH uses data from CEHRT to conduct a query of a Prescription Drug Monitoring Program (PDMP) for prescription drug history, except where prohibited and in accordance with applicable law.

We proposed that the query of the PDMP for prescription drug history must be conducted prior to the electronic transmission of the Schedule II opioid prescription and that eligible hospitals and CAHs would have flexibility to query the PDMP using CEHRT in any manner allowed under their State law.

We proposed to include in this measure all permissible prescriptions and dispensing of Schedule II opioids regardless of the amount prescribed during an encounter and that multiple Schedule II opioid prescriptions prescribed on the same date by the same eligible hospital or CAH would not require multiple queries of the PDMP. In the proposed rule, we requested comment on whether we should further refine the measure to limit queries of the PDMP to once during a hospital stay regardless of whether multiple eligible medications are prescribed during this time.

CMS and ONC worked together to define the following:

***Denominator:*** Number of Schedule II opioids electronically prescribed using CEHRT by the eligible hospital or CAH during the EHR reporting period.

***Numerator:*** The number of Schedule II opioid prescriptions in the denominator for which data from CEHRT is used to conduct a query of a PDMP for prescription drug history except where prohibited and in accordance with applicable law.

***Exclusion:*** Any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions for controlled substances and is not located within 10 miles of any pharmacy that accepts electronic prescriptions for controlled substances at the start of their EHR reporting period.

We proposed that the exclusion criteria would be limited to prescriptions of controlled substances as the measure action is specific to prescriptions of Schedule II opioids only and does not include any other types of electronic prescriptions.

We stated that if we finalized the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, an additional exclusion would be available beginning in 2020 for eligible hospitals and CAHs that could not report on this measure in accordance with applicable law.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20528), we stated that we understood PDMP integration is not currently in widespread use for CEHRT, and many eligible hospitals and CAHs may require additional time and workflow changes at the point of care before they can meet this measure without experiencing significant burden and that manual data entry and manual calculation of the measure may be necessary. We also acknowledged that there are no existing certification criteria for the query of a PDMP but we believed the use of structured data captured in the CEHRT, could support querying a PDMP through the broader use of health IT. In the proposed rule, we sought

public comment on whether ONC should consider adopting standards and certification criteria to support the query of a PDMP, and if such criteria were to be adopted, on what timeline should CMS require their use to meet this measure.

We sought public comment especially from health care providers and health IT developers on whether they believe use of the NCPDP SCRIPT 2017071 standard for e-prescribing could support eligible hospitals and CAHs seeking to report on this measure, and whether HHS should encourage use of this standard through separate rulemaking.

In the proposed rule, we sought public comment on the challenges associated with querying the PDMP with and without CEHRT integration and whether this proposed measure should require certain standards, methods or functionalities to minimize burden.

In including EPCS as a component of the measure we proposed, we acknowledged and sought input on perceived and real technological barriers as part of its effective implementation including but not limited to input on two-factor authentication and on the effective and appropriate uses of technology, including the use of telehealth modalities to support established patient provider relationships subsequent to in-person visit(s) and for prescribing purposes.

In the proposed rule, we also requested comment on limiting the exclusion criteria to electronic prescription for controlled substances and whether there are circumstances which may justify any additional exclusions for the Query of PDMP measure and what those circumstances might be.

We noted that under the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, measures would not have required thresholds for reporting. Therefore, if the proposed scoring methodology and this measure were finalized, this measure would not have a reporting threshold. We proposed a threshold of at least one prescription for this measure if we did not finalize the proposed scoring methodology as varying State laws related to integration of a PDMP into CEHRT can lead to differing standards for querying.

We also proposed that in order to meet this measure, an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3) and 170.315(a)(10)(ii).

We proposed to codify the Query of PDMP measure at § 495.24(e)(5)(iii)(B).

Comment: A commenter indicated that CMS should work with stakeholders to determine feasibility and testing of EPCS measures prior to finalizing.

Response: We agree that there should be testing of the measures prior to requiring them as part of the Promoting Interoperability Programs. We note that we are finalizing the Query of PDMP measure as proposed which is discussed in the section VIII.D.5. of the preamble of this final rule. The optional reporting for this measure in CY 2019 allows additional time for expansion of PDMP integration into EHRs, implementation of system changes and workflows and for health IT developers to work with health care providers on additional methods for CEHRT to capture and calculate actions specific to the PDMP query.

Comment: Several commenters agreed with the addition of the Query of PDMP measure indicating it was important for reducing inappropriate prescriptions and improving patient outcomes.

Response: We thank the commenters for their support and feedback of the proposed new measure. We believe that PDMPs currently provide valuable information on prescribed controlled substances including dosages, quantity and combinations of prescriptions. In addition, we believe PDMPs will continue to progress to achieve full integration on a widespread scale resulting in more informed prescribing practices, reduced inappropriate prescribing of opioids, and improved patient outcomes while reducing workflow and time needed for querying.

Comment: Several commenters supported the Query of PDMP measure but stated standards should be developed due to varying integration efforts across the nation. Another comment stated that CMS should collaborate with the DEA on standards and capabilities including use of mobile devices for cost control and increased flexibility.

One commenter indicated that standards should include PDMP onboarding, interstate access agreements, improved access to PDMPs via national brokers, support for patient and user ID matching between CEHRT and PDMPs. One commenter stated that costs and incentives associated with onboarding should be a priority consideration.

Response: We thank the commenters for their support of the Query of PDMP measure and recognize that integration efforts are in various stages. While a number of these comments raise issues outside the scope of this rule, we appreciate the feedback on challenges and barriers relevant to effectively implementing the measure, which we

requested in the proposed rule. This input will help to inform our future work as we continue collaborating with our colleagues across HHS, and with other public-and private-sector partners as appropriate, as we all work to advance the maturity and capabilities of America's health information infrastructure to seamlessly integrate with CEHRT and efficient clinician workflows. This is important not only for PDMP query functionality but for also other relevant tools, such as automated clinical decision support, that facilitate more informed prescribing practices and improved patient outcomes.

Our goal on burden reduction also includes consideration of costs associated with meeting the Promoting Interoperability Programs requirements. We will continue to listen to stakeholders on concerns related to costs and work to mitigate burdens whenever practicable within our programs' responsibilities and authorities.

Comment: One commenter indicated that health care providers should be able to continue to use a health information exchange to access Schedule II opioid prescription drug history in order to earn points for the Query of PDMP measure.

Response: Neither of the proposed measures, including the Query of PDMP measure specifies whether providers' CEHRT connects to PDMPs directly or through HIEs. Therefore, use of HIEs to access Schedule II opioid prescription drug history is acceptable.

Comment: One commenter also requested consideration for use of an open API by PDMPs to enable EHR access to Schedule II opioid prescription drug history.

Response: Noting that we understand "open API" to mean an API for which the PDMP has made freely and publicly available the specific business and technical

documentation necessary to interact with the API, we agree that implementing such an API is a step PDMPs can take to make it easier for providers to connect their CEHRT to PDMPs. We are aware of some States having already taken this step to support efforts to integrate PDMP with health IT used by prescribers and pharmacists in the course of their clinical work.

Comment: A commenter stated that CMS should remove the requirement to use the capabilities and standards of CEHRT for querying the PDMP due to the absence of technology and infrastructure supporting electronic querying.

Response: We thank the commenter for this suggestion. However, we disagree that the Query of PDMP measure should not include a requirement to use the capabilities and standards of CEHRT. We proposed that, in order to report on the Query of PDMP and receive a score, eligible hospitals and CAHs must use the capabilities and standards at 45 CFR 170.315(b)(3) for electronic prescribing and 170.315(a)(10)(ii) for drug formulary checks which are required under the e-Prescribing measure. In the proposed rule (83 FR 20527), we proposed that the query of PDMP for prescription drug history must be conducted prior to the electronic transmission of the Schedule II opioid prescription. The certification criteria at 45 CFR 170.315(b)(3) would allow a health care provider to create a new prescription, change a prescription, cancel a prescription, refill a prescription, request fill status notifications and request and receive medication history information which we believe could support the query for a prescription drug history of the patient.

In addition, 45 CFR 170.315(a)(10)(ii) drug formulary checks are most useful when performed in combination with e-prescribing which could increase the efficiency and safety of care and lower costs. We believe that the use of capabilities and standards at 45 CFR 170.315(b)(3) for electronic prescribing for Query of PDMP, which include the ability of the user to reconcile a patient's active medication list, medication allergy list, and problem list, are key to system interoperability. This reconciliation will allow for the seamless flow of medication history data between disparate systems to help prescribers and pharmacists improve patient outcomes. As noted in the proposed rule and elsewhere in this final rule, given the variance in State level requirements and actions used to perform the query, health care providers have flexibility to satisfy this measure by querying the PDMP in any manner legal and practicable in their State.

Comment: A few commenters stated that the Query of PDMP measure should not be finalized as part of the Promoting Interoperability Programs, and the integration of the PDMP with health information technology should remain as part of State requirements only.

Response: We believe finalizing the Query of PDMP measure would be instrumental in furthering widespread implementation of PDMP query capabilities within EHRs. We noted in the proposed rule that several Federal agencies have had integral roles in the expansion of PDMPs with health information technology systems and we believe that this measure will encourage continued progress on integrating PDMP queries into EHR work flows, and reinforce the importance of prescribers seeking and using

PDMP information where it is relevant to making more informed opioid prescribing decisions.

Comment: A few commenters supported the use of NCPDP Script Standard Implementation Guide Version 2017071 medication history transactions for PDMP queries and response. One commenter proposed convergence on the use of HL7 FHIR such as CDS Hooks for other consumer facing apps to more extensively connect EHRs and consumer facing apps with PDMPs as a long term goal.

Response: We appreciate the commenters' views. In partnership with colleagues across HHS, we encourage and applaud advances in standards and their use to deliver innovative, interoperable solutions that will seamlessly integrate PDMP query functionality and other relevant tools, such as automated clinical decision support, into clinician-friendly, patient-centered CEHRT-enabled workflows that facilitate safer, more informed prescribing practices and improved patient outcomes.

Comment: One commenter requested an additional exclusion for the Query of PDMP measure specific to States that do not have a Statewide PDMP. Another commenter requested exclusion criteria for hospitals whose States do not allow direct integration with an API as workflows that are not interoperable will increase reporting burden.

Response: We decline to finalize additional exclusion criteria, as recommended by the commenters. We stated that health care providers may query the PDMP in any manner that is allowed by their State, which we believe would reduce the burden of instituting new workflows. In addition, we are adopting exclusion criteria below for

hospitals not able to report on this measure in accordance with applicable law when the measure is required beginning in CY 2020. We will continue to monitor health care provider use and querying of PDMPs and consider whether additional exclusion criteria are necessary in future rulemaking, as the measure is optional for CY 2019.

We decline to finalize exclusion criteria for eligible hospitals and CAHs whose States do not allow for direct integration through an API. We believe that finalization of exclusion criteria such as this would enable a significant number of health care providers to avoid reporting on the measure, even though they would have the ability to query a PDMP through other means. In addition, we believe that although additional time and workflow changes may be necessary in order for health care providers to meet the measure, it is still possible without direct integration as long as it is conducted using CERHT in accordance with applicable State law.

Comment: One commenter stated that CMS should work with State and other Federal agencies to develop a common set of formulary schedules, common data set and common set of interoperability standards that can easily work at an interstate level.

Response: We recognize that there is work to be done to resolve various real and perceived barriers to achieving the full potential of interoperable health IT and health information exchange to improve patient care and outcomes. We plan to continue collaborating with our colleagues across HHS, including ONC, on standards and requirements specific to the Promoting Interoperability Programs. We believe that the pilots and projects discussed in the proposed rule at (83 FR 20527) which include collaboration between the agencies of ONC, SAMHSA, DOJ and CDC for example, have

had integral roles in the progression of health IT as related to the opioid crisis. Likewise, the ONC and CDC have been integral in development of Promoting Interoperability Program requirements, including interoperability standards and certification criteria; therefore, we will continue to work with our colleagues on future requirements specific to interoperability standards, data sets and formulary schedules.

Comment: One commenter stated that PDMP view-only access is insufficient and data exchange that can enable clinical decision support to assist health care providers is needed.

Response: We understand where PDMP query is implemented in a way that does not return data in a computable format consistent with standards the CEHRT supports, providers and their patients will not be able to benefit from advanced capabilities of EHRs, such as clinical decision support.

We agree that the ability to automate real-time clinical decision support informed by a patient's complete prescription drug history would be helpful to providers. We believe that as the measure is more widely implemented, and concurrently as advanced CDS functionalities become more widely available to providers via their CEHRT, both are vital to successfully combating the opioid crisis. To that end, we will continue to work across HHS and with our stakeholders to develop the necessary standards and complementary resources that will support such use. This will include further development of technical interoperability standards and may include revisions to this measure in future rulemaking.

Comment: One commenter stated that the Query of PDMP measure should be prescription-based for simplicity, not evaluating medications administered during the admission or presentation to the ED. Another commenter stated the denominator should reference discharged patients during the EHR reporting period not the number of opioids prescribed during the EHR reporting period, and recommended the denominator be changed to “Discharges where Schedule II medications were prescribed.”

Response: The denominator for the measure is based on the Schedule II opioids that are electronically prescribed using CEHRT during the EHR reporting period rather than medications administered as the intent is to identify multiple provider episodes (physician shopping), prescriptions of dangerous combinations of drugs, prescribing rates and controlled substances prescribed in high quantities. In addition, we decline to revise the denominator of the measure as it could include prescriptions upon discharge as well as electronic prescriptions generated during the admission.

Comment: One commenter stated that the numerator definition does not follow typical workflow for PDMP queries as some States require logging into an external portal making data capture and measure calculation difficult.

Response: We understand that for PDMPs that do not currently allow for integration with EHR systems, prescribers may be required to take additional actions to complete the query, such as logging into an external portal. We acknowledged in the proposed rule that due to the varying integration of PDMPs into EHR systems, additional time, workflow changes and manual data capture and calculation would be needed to complete the query and could contribute to overall reporting burden. Therefore, this

measure allows health care providers the flexibility to query the PDMP using CEHRT in any manner legal and practicable in their State.

Comment: A few commenters stated that CERHT should also be able to support workflow integration such as querying the PDMP on demand. Another commenter indicated there are challenges associated with non-consolidated responses, which present a patient-centric view of all prescribing activities.

Response: It is our understanding that PDMP query integration with prescriber workflow can be accomplished with CEHRT on the market today. However, we acknowledge that it may not be an automatic capability of CEHRT and may not be possible in all States due to variations in laws and technical approaches. As the measure will be required beginning in CY 2020, we will review those variations over the next year and consider whether additional exclusion criteria would be necessary.

Comment: One commenter requested clarification on whether hospitals must query multiple registries if the hospital's location is close to a State border.

Response: We are not requiring eligible hospitals and CAHs to query multiple registries if the location is close to the State border, as we believe this would serve to increase the burden by requiring additional workflows and time requirements. We defer to the hospital and/or prescriber on whether multiple queries should be performed based on clinical relevance in specific circumstances.

In addition, next year we intend to propose in rulemaking that EHR-integrated PDMP querying would be required beginning in CY 2020 as part of this measure. In connection with that proposed requirement, we also intend to propose an additional

exclusion for providers in States where integration with a Statewide PDMP is not yet feasible or not yet widely available. This exclusion would require confirmation from the State acknowledging that PDMP integration of EHRs is not yet in place. We will seek comment and suggestions in future rulemaking to ascertain if additional exclusions are needed for eligible hospitals or CAHs located in one of the States where PDMPs are not integrated into EHRs. We understand the lack of certification criteria and standards that are currently available as it relates to the Query of PDMP measure, but believe that this measure is essential to ensuring that we are working to combat the opioid crisis. We will continue to collaborate with our Federal partners to advance the capabilities, standards and functionalities for querying PDMPs as well as to facilitate more informed prescribing practices and improvement of patient outcomes.

After consideration of the public comments we received, we are finalizing the Query of PDMP measure as proposed.

We are finalizing that in order to meet this measure, an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3) and 170.315(a)(10)(ii).

We are codifying the Query of PDMP measure at § 495.24(e)(5)(iii)(B).

We are adopting the measure as follows:

Query of PDMP

***Measure Description:*** For at least one Schedule II opioid electronically prescribed using CEHRT during the EHR reporting period, the eligible hospital or CAH uses data from CEHRT to conduct a query of a Prescription Drug Monitoring Program

(PDMP) for prescription drug history, except where prohibited and in accordance with applicable law.

***Denominator:*** Number of Schedule II opioids electronically prescribed using CEHRT by the eligible hospital or CAH during the EHR reporting period.

***Numerator:*** The number of Schedule II opioid prescriptions in the denominator for which data from CEHRT is used to conduct a query of a PDMP for prescription drug history except where prohibited and in accordance with applicable law.

***Exclusions beginning with an EHR reporting period in CY 2020:*** Any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions for controlled substances and is not located within 10 miles of any pharmacy that accepts electronic prescriptions for controlled substances at the start of their EHR reporting period; and

Any eligible hospital and CAH that could not report on this measure in accordance with applicable law.

(2) Measure: Verify Opioid Treatment Agreement

The intent of this measure is for eligible hospitals and CAHs to identify whether there is an existing opioid treatment agreement when they electronically prescribe a Schedule II opioid using CEHRT if the total duration of the patient's Schedule II opioid prescriptions is at least 30 cumulative days. We believe seeking to identify an opioid treatment agreement will further efforts to coordinate care between health care providers and foster a more informed review of patient therapy.

In the proposed rule (83 FR 20529), we stated that we understood there are varied opinions regarding opioid treatment agreements amongst health care providers. Because of the debate among practitioners, we requested comment on the challenges this proposed measure may create for health care providers, how those challenges might be mitigated, and whether this measure should be included as part of the Promoting Interoperability Program. We also acknowledged challenges related to prescribing practices and multiple State laws, which may present barriers to the uniform implementation of this proposed measure. In the proposed rule, we sought public comment on the challenges and concerns associated with opioid treatment agreements and how they could impact the feasibility of the proposal.

***Proposed Measure Description:*** For at least one unique patient for whom a Schedule II opioid was electronically prescribed by the eligible hospital or CAH using CEHRT during the EHR reporting period, if the total duration of the patient's Schedule II opioid prescriptions is at least 30 cumulative days within a 6-month look-back period, the eligible hospital or CAH seeks to identify the existence of a signed opioid treatment agreement and incorporates it into CEHRT.

We proposed this measure would include all Schedule II opioids prescribed for a patient electronically using CEHRT by the eligible hospital or CAH during the EHR reporting period, as well as any Schedule II opioid prescriptions identified in the patient's medication history request and response transactions during a 6 month look-back period, where the total number of days for which a Schedule II opioid was prescribed for the patient is at least 30 days.

In the proposed rule, we acknowledged in part, that completing the Verify Opioid Treatment Agreement measure might prove burdensome to health care providers as it could be difficult to identify an existing treatment agreement. Attempting to identify whether there is a treatment agreement in place would likely require additional time and changes to existing workflows. In the proposed rule, we sought public comment on pathways to facilitate the identification and exchange of treatment agreements and opioid abuse treatment planning.

We proposed that the 6-month look-back period would begin on the date on which the eligible hospital or CAH electronically transmits its Schedule II opioid prescription using CEHRT.

We proposed a 6-month look-back period in order to identify more egregious cases of potential overutilization of opioids and to cover timeframes for use outside the EHR reporting period. We proposed that the 6-month look-back period would utilize at a minimum the industry standard NCDPC SCRIPT v10.6 medication history request and response transactions codified at 45 CFR 170.205(b)(2).

In the proposed rule, we did not propose to define an opioid treatment agreement as a standardized electronic document; nor did we propose to define the data elements, content structure, or clinical purpose for a specific document to be considered a “treatment agreement.” We sought public comment on what characteristics should be included in an opioid treatment agreement and incorporated into CEHRT, such as clinical data, information about the patient’s care team, and patient goals and objectives, as well as which functionalities could be utilized to accomplish the incorporation of this

information. In the proposed rule, we also sought public comment on methods or processes for incorporation of the treatment agreement into CEHRT, including which functionalities could be utilized to accomplish this. We sought public comment on whether there are specific data elements that are currently standardized that should be incorporated via reconciliation and if the “patient health data capture” functionality could be used to incorporate a treatment plan that is not a structured document with structured data elements.

***Denominator:*** Number of unique patients for whom a Schedule II opioid was electronically prescribed by the eligible hospital or CAH using CEHRT during the EHR reporting period and the total duration of Schedule II opioid prescriptions is at least 30 cumulative days as identified in the patient’s medication history request and response transactions during a 6-month look-back period.

***Numerator:*** The number of unique patients in the denominator for whom the eligible hospital or CAH seeks to identify a signed opioid treatment agreement and, if identified, incorporates the agreement in CEHRT.

***Exclusions:*** Any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions for controlled substances and is not located within 10 miles of any pharmacy that accepts electronic prescriptions for controlled substances at the start of its EHR reporting period.

We proposed that the exclusion criteria would be limited to prescriptions of controlled substances as the measure action is specific to electronic prescriptions of Schedule II opioids only and does not include any other types of electronic prescriptions

and that an additional exclusion would be available beginning in 2020 for eligible hospitals and CAHs that could not report on this measure in accordance with applicable law under the proposed scoring methodology in the proposed rule. We requested public comment on limiting the exclusion criteria to electronic prescriptions for controlled substances and whether there are circumstances which may require an additional exclusion for the Verify Opioid Treatment Agreement measure and what those circumstances might be.

We stated in the proposed rule that if the proposed scoring methodology and measure were finalized, this measure would not have a reporting threshold. We also proposed that if we did not finalize the proposed scoring methodology, but we finalized this proposed measure, that there would be a threshold of at least one unique patient for this new measure. We also noted there are medical diagnoses and conditions that could necessitate prescribing Schedule II opioids for a cumulative period of more than 30 days.

We also proposed that, in order to meet this measure, an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3), 170.315(a)(10) and 170.205(b)(2).

Lastly, we requested comment on whether we should explore adoption of a measure focused only on the number of Schedule II opioids prescribed and the successful use of EPCS for permissible prescriptions electronically prescribed. We sought public comment about the feasibility of such a measure, and whether stakeholders believe this would help to encourage broader adoption of EPCS.

We proposed to codify the Verify Opioid Treatment Agreement measure at § 495.24(e)(5)(iii)(C).

Comment: A few commenters supported the Verify Opioid Treatment Agreement measure and indicated that it was an important measure for reducing inappropriate prescriptions.

Response: We thank the commenters for their support of the measure. We believe the Verify Opioid Treatment Agreement measure could have some benefit for promoting care coordination between health care providers. We also agree that this measure will help in reducing inappropriate prescribing practices. In addition, we believe there are merits to combatting the opioid crises through various means including health care providers verifying if there is an opioid treatment agreement in place before prescribing.

However, we also have considered the lack of standards and agreement on the effectiveness of opioid treatment agreements. Therefore, we are finalizing the Verify Opioid Treatment Agreement measure as optional for 2019 and 2020. We will reevaluate the status of the measure for an EHR reporting period beginning in CY 2021.

Comment: Many commenters requested that CMS not finalize the Verify Opioid Treatment Agreement measure due to the lack of defined data elements, structure, and standards and certification criteria. Some of those commenters indicated the measure would be administratively burdensome as most patients are discharged with no more than a week's prescription of schedule II controlled substances.

In addition, a few commenters were concerned that finalization of this measure may result in unintended negative consequences such as a decline of pain management therapies and treatment for patients who are post-surgical or recovering from acute illnesses, reluctance of patients to seek treatment or health care related to pain or reluctance on part of health care providers to prescribe short term opioids when appropriate.

Another commenter stated there are no current standards for exchange of opioid treatment agreements, they are not usually based on clinical information, and are primarily provider requested. One commenter stated there is no evidence that opioid treatment agreements improve patient outcomes. One commenter stated opioid treatment agreements are more commonly used by outpatient programs where use of CEHRT is limited.

Response: We understand the concerns voiced by the commenters and acknowledged the lack of defined data elements, structure, standards and criteria. We also understand the concerns of the commenters that discussed the unintended consequences and the potential administrative burden associated with this measure. We also are well aware of the varying evidence regarding the efficacy of the opioid treatment agreements. All of these concerns voiced by commenters were acknowledged in the proposed rule (83 FR 20528 through 20530). However, we believe there are health care providers who are already verifying if there is an opioid treatment agreement in place before prescribing opioids. We also believe it is important to continue to improve

prescribing practices for controlled substances using currently available methods, and that this particular measure can help lead to improvement in prescribing practices.

As noted in the proposed rule (83 FR 20529), there are a number of ways certified health IT may be able to support the electronic exchange of opioid abuse related treatment data, such as use of the C-CDA care plan template that is currently optional in CEHRT. This template contains information on health concerns, goals, interventions, health status evaluation & outcomes sections that could support the development of an opioid treatment agreement. In addition, the “patient health data capture” functionality which is part of the 2015 Edition (45 CFR 170.315(e)(3)) could be used to incorporate a treatment plan that is not a structured document with structured data elements.

We disagree that this measure will result in unintended consequences, such as the decline of pain management therapies. As we discussed in the proposed rule (83 FR 20530), we are only including patients where the total duration of the patient’s Schedule II opioid prescriptions is at least 30 cumulative days within a 6-month look-back period. We also believe this measure could encourage discussion and additional treatment options between health care providers and patients. In addition, this measure would help to rule out issues related to pain management therapies for certain post-surgical patients and those recovering from acute illnesses. We also understand that certain medical conditions and diagnoses could necessitate prescribing for over 30 days, including some terminal illnesses, recovery from some surgeries or their underlying conditions, and other diagnoses that cause pain requiring alleviation by opioids. It is not our intention to be a barrier to the most effective and clinically appropriate pain

alleviating therapies available to patients in need, or to impose an undue burden on health care providers. Our goal is to work on improving patient outcomes and we do believe that this measure has merits, as the opioid treatment agreement can be an integral part of clinically effective, patient-empowering pain management plans developed and implemented in the course of shared decision-making by a clinical team and a patient with serious, chronic pain.

Opioid treatment agreements may be more commonly used by outpatient programs where use of CEHRT is limited, however we believe their verification in other care settings such as hospitals would improve prescribing practices through identification of overutilization of controlled substances.

Finally, we reiterate that this measure will be optional for hospitals in 2019 and 2020. We acknowledge many providers may not find this measure applicable for their setting, and believe it is most likely to be adopted by those providers already engaged in treatment scenarios where the verification of an Opioid Treatment Agreement would be beneficial, such as providers offering treatment for substance use disorders, or providers closely integrated with behavioral health treatment facilities.

Comment: One commenter stated that the measure could present challenges in the context of Part 2 programs as data sharing restrictions complicate feasibility of the measure.

Response: We do understand that 42 CFR Part 2 protects the confidentiality for substance use disorder patient records. However, we note that the disclosure of such

information may be possible under certain conditions, including upon patient consent or request for the disclosure of such information.

Comment: One commenter requested an additional exclusion for Verify Opioid Treatment Agreement measure to include patients with certain diagnoses or settings including but not limited to terminal or end stage conditions, cancer and hospice settings.

One commenter disagreed with use of medication history transaction for the measure denominator as this does not support the concept of prescription days but uses a duration, which has no start or stop date.

Response: We decline to add an additional exclusion as this measure is optional for CY 2019 and 2020. We are not finalizing the proposed exclusion criteria (83 FR 20530) as we are finalizing this measure as optional for both CY 2019 and 2020.

Moreover, as we discuss in more detail in reference to the preceding comment, we do not believe that confirming an opioid treatment agreement is inconsistent with sound clinical practices for developing and implementing holistic, patient-centered pain management plans for patients affected by conditions causing pain for which opioid treatment for more than 30 days is a clinically appropriate component of an effective overall treatment approach.

We decline to the modify the denominator for this measure as we indicated that we are seeking the cumulative days for an opioid prescription over a 6 month look back period to identify egregious cases (83 FR 20529). We understand that each prescription would include a quantity based on the number of doses allowed. However, the intent is to also look at prescriptions from other health care providers as well for episodes of

prescription shopping. As we indicated in the proposed rule (83 FR 20529), the 6 month look back would begin on the date in which the eligible hospital or CAH electronically transmits its Schedule II Opioid prescription using CEHRT.

Comment: A few commenters stated that this measure may not be possible to calculate as the NCPDP 10.6 Medication History query does not contain a field for prescription days and relies on third party data that may not be discrete.

Response: We recognize that the capabilities to which health IT must be certified in order for it to meet the minimum requirements for CEHRT under this program do not include the ability to automatically track prescriber behaviors addressed by this measure. However, we disagree that this measure cannot be implemented at this time, and believe that some health care providers are currently verifying if there is an opioid treatment agreement in place before they prescribe. As we noted that in the proposed rule (83 FR 20529), the adoption of the NCPDP 10.6 standard does not preclude developers from also incorporating and using technology standards or services not required by regulation in their health IT product which could result in development of a workflow which more closely resembles types that health care provider are currently using. However we do understand the limitations for those health care providers that have chosen not to implement such standards and functionalities beyond the minimum to which their CEHRT is required to be certified to meet the requirements of this program.

We also recognize that a provider's attempt to verify whether a treatment agreement is in place may be difficult to capture in an automated fashion in cases where a machine readable treatment agreement cannot be queried. While we believe some

providers do currently have the ability to query for an electronic treatment agreement, which could support machine capture of this data, we recognize that for most health care providers this will require additional workflow steps.

As a result of these issues, we are also finalizing this measure as optional for CYs 2019 and 2020, and expect this measure is likely to be adopted by a limited set of providers in treatment arrangements that already possess the infrastructure to support capture and calculation of this measure. We intend to revisit this measure along with the necessary data elements in future rulemaking.

Comment: A few commenters stated that the measure would contain unreliable data and suspect calculations as it would be possible for CEHRT to receive duplicative medication history data from various systems. One commenter requested information on how the EHR would machine calculate duplicative data and cumulative days.

One commenter stated the patient's medical history is not clearly laid out in external prescription history and may require manual calculation with no system ability to determine if users are identifying applicable patients or not.

Response: We recognize that this measure would be technically complex and potentially burdensome for providers to implement. However, we believe that some health care providers may be able to verify if there is an opioid treatment agreement in place through various means such as C-CDA based information exchange. We understand that there is a potential for duplicative medication history data but believe that the reconciliation burden this currently poses for clinicians not only in context of

prescribing long-term opioid therapy but a variety of more general clinical situations and thus is one that the market should already be working to address.

Moreover, as the clinical practice this measure tracks is more widely adopted, we believe health care providers and their health IT vendors will develop innovative solutions to accurately capture needed data elements and calculate the measure while reducing workflow complexity and inconvenience to prescribers and other personnel involved in the care and/or measurement process. Therefore, we are taking into account these limitations and are finalizing this measure as optional for CYs 2019 and 2020 and will reevaluate the status of the measure for an EHR reporting period beginning in CY 2021.

After consideration of the comments we received, and for the reasons stated above, we are finalizing the Verify Opioid Treatment Agreement measure as proposed with the modification discussed in section VIII.D.6. of the preamble of this final rule, that the measure will be optional in CYs 2019 and 2020. We are codifying the measure at § 495.24(e)(5)(iii)(C). In addition, we are finalizing that, in order to meet this measure, an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(3), 170.315(a)(10) and 170.205(b)(2).

We are adopting the measure as follows:

Verify Opioid Treatment Agreement

***Measure Description:*** For at least one unique patient for whom a Schedule II opioid was electronically prescribed by the eligible hospital or CAH using CEHRT during the EHR reporting period, if the total duration of the patient's Schedule II opioid

prescriptions is at least 30 cumulative days within a 6-month look-back period, the eligible hospital or CAH seeks to identify the existence of a signed opioid treatment agreement and incorporates it into CEHRT.

***Denominator:*** Number of unique patients for whom a Schedule II opioid was electronically prescribed by the eligible hospital or CAH using CEHRT during the EHR reporting period and the total duration of Schedule II opioid prescriptions is at least 30 cumulative days as identified in the patient's medication history request and response transactions during a 6-month look-back period.

***Numerator:*** The number of unique patients in the denominator for whom the eligible hospital or CAH seeks to identify a signed opioid treatment agreement and, if identified, incorporates the agreement in CEHRT.

c. Final Policy for the Health Information Exchange (HIE) Objective

The Health Information Exchange measures for eligible hospitals and CAHs hold particular importance because of the role they play within the care continuum. In addition, these measures encourage and leverage interoperability on a broader scale and promote health IT-based care coordination. However, through our review of existing measures, we determined that we could potentially improve the measures to further reduce burden and better focus the measures on interoperability in provider to provider exchange. Such modifications would address a number of concerns raised by stakeholders including:

- Supporting the implementation of effective health IT supported workflows based on a specific organization's needs;

- Reducing complexity and burden associated with the manual tracking of workflows to support health IT measures; and
- Emphasizing within these measures the importance of using health IT to support closing the referral loop to improve care coordination.

The Health Information Exchange objective currently includes three measures under § 495.24(c)(7)(ii) (in the proposed rule (83 FR 20530) we inadvertently referred to § 495.24(e)(6)(ii)), and we believe we can potentially improve each to streamline measurement, remove redundancy, reduce complexity and burden, and address stakeholders' concerns about the focus and impact of the measures on the interoperable use of health IT.

As discussed in section VIII.D.6.a. of the preamble of the proposed rule, we proposed to remove the exclusions from all three of the measures associated with the Health Information Exchange objective under § 495.24(c)(7)(iii), as reflected in the two measures proposed under § 495.24(e)(6). However, we stated that if we finalized the new scoring methodology we proposed, eligible hospitals and CAHs would be able to claim an exclusion under the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure.

We proposed several changes to the current measures under the Stage 3 Health Information Exchange objective. First, we proposed to change the name of Send a Summary of Care measure to Support Electronic Referral Loops by Sending Health Information. We also proposed to remove the current Stage 3 Clinical Information Reconciliation measure and combine it with the Request/Accept Summary of Care

measure to create a new measure, Support Electronic Referral Loops by Receiving and Incorporating Health Information. This proposed new measure would include actions from both the current Request/Accept Summary of Care measure and Clinical Information Reconciliation measure and focus on the exchange of the health care information while reducing the administrative burden of reporting on two separate measures.

We stated that if we did not finalize the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, we would maintain the current Health Information Exchange objective, associated measures and exclusions under § 495.24(c)(7) as described in section VIII.D.5. of the preamble of the proposed rule and as outlined in the table in that section which describes Stage 3 objectives and measures if new scoring methodology is not finalized.

Comment: One commenter suggested retaining the previous names of the Request/Accept Summary of Care and Clinical Information Reconciliation measures for consistency and to prevent confusion with the HIPAA electronic transaction for “Referrals” which also uses the terminology “loops.”

Response: We respectfully decline to retain the previous name of the measures Request/Accept Summary of Care and Clinical Information Reconciliation as the overall intent is to combine the functionalities and actions of both measures to reduce the burden of having to report on two separate measures thereby simplifying reporting. We noted in the proposed rule that the separate Clinical Information Reconciliation measure does not include the exchange of health care information nor use of CEHRT to successfully

complete the measure action and is redundant in the action to incorporate summary of care records with the Request/Accept Summary of Care measure. As previously indicated in the proposed rule and this final rule, the focus of the program is on reducing burden, increasing interoperability, exchange of health care information and the advanced use of CEHRT.

We disagree the measure name will create undue confusion with the HIPAA electronic transaction as both fall under separate programs and are associated with differing actions.

Comment: A few commenters agreed with use of any C-CDA document templates available within the C-CDA which contains the most clinically relevant information that may be required by the recipient of the transition or referral. The commenters stated this proposal supports increased flexibility, enables increased information sharing between care providers, and will help providers better understand their patient's history.

Response: We appreciate the feedback by the commenter and agree that this proposal will provide further flexibility for health care providers to focus on clinically relevant information and decrease burden associated with reporting requirements.

Comment: A few commenters requested that CMS allow for flexibility to use any HL7 C-CDA formats available to meet the HIE measures to create and electronically send summary of care records. A few commenters stated all CEHRT does not support every document types within the HL7 C-CDA nor are they applicable in every setting.

One commenter stated that since other document types/templates for the 2015 Edition are not required, availability and delivery within the suggested timeframe for implementation of the 2015 Edition may be unlikely; therefore, healthcare providers should not be limited to the three document types as part of the 2015 Edition. Another commenter stated that CEHRT should be tested for the ability to generate and send the needed C-CDA template as well as the ability to receive and accept any C-CDA template; therefore, standard templates should be required.

Response: We appreciate commenters' support for the proposal to allow use of any document template within the C-CDA standard for purposes of the measures under the Health Information Exchange objective. We believe this proposal will provide further flexibility for health care providers to focus on clinically relevant information. We note that CEHRT supports the ability to send and receive C-CDA documents according to Releases 1.1 and 2.1 to support interoperability and exchange. The 2015 Edition transitions of care certification criterion at § 170.315(b)(1) requires Health IT Modules support the Continuity of Care Document, Referral Note, and (inpatient settings only) Discharge Summary document templates.

At a minimum, all CEHRT will be able to support exchange of those three document types therefore, testing should not be necessary. However, that does not preclude developers of CEHRT in supporting additional document templates.

While eligible hospitals' and CAHs' CEHRT must be capable of sending the full C-CDA upon request, we believe this additional flexibility will help support clinicians efforts to ensure the information supporting a transition is relevant. We note that in the

use of a document template beyond those available in the certification program, the provider would need to work with their developer to determine appropriate technical workflows and implementation.

Comment: One commenter stated that C-CDA standards used for referrals should be required to include data to link a referral request to consult report, a universal referral tracking or index number, better patient identity matching and use of common titles for the document

Response: We appreciate the comment and encourage the commenter to participate in the standards development-enhancement process of HL7, the steward of the HL7 Implementation Guide for CDA Release 2.

Comment: A commenter recommended support for the widespread availability of patient identifiers for the health information exchange measures in the Promoting Interoperability Programs.

Response: We appreciate the comment and will consider the recommendation for future rulemaking to the extent permissible by law.

#### (1) Modifications to Send a Summary of Care Measure

In the proposed rule (83 FR 20531), we proposed to change the name of the Send a Summary of Care measure at 42 CFR 495.24(c)(7)(ii)(A) to Support Electronic Referral Loops by Sending Health Information at 42 CFR 495.24(e)(6)(ii)(A), to better reflect the emphasis on completing the referral loop and improving care coordination. We proposed to change the measure description only to remove the previously defined threshold from Stage 3, in alignment with our proposed implementation of a performance-based scoring

system, to require that the eligible hospital or CAH create a summary of care record using CEHRT and electronically exchange the summary of care record for at least one transition of care or referral.

***Proposed name and measure description: Support Electronic Referral Loops by Sending Health Information:*** For at least one transition of care or referral, the eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care: (1) Creates a summary of care record using CEHRT; and (2) electronically exchanges the summary of care record.

We stated in the proposed rule that if an eligible hospital or CAH is the recipient of a transition of care or referral, and subsequent to providing care the eligible hospital or CAH transitions or refers the patient back to the referring provider of care, this transition of care should be included in the denominator of the measure for the eligible hospital or CAH.

We proposed that eligible hospitals and CAHs may use any document template within the C-CDA standard for purposes of the measures under the Health Information Exchange objective. While eligible hospitals' and CAHs' CEHRT must be capable of sending the full C-CDA upon request, we believe this additional flexibility will help support efforts to ensure the information supporting a transition is relevant.

For instance, when the eligible hospital or CAH is referring to another health care provider, the recommended document is the "Referral Note," which is designed to communicate pertinent information from a health care provider who is requesting services of another health care provider of clinical or nonclinical services. When the

receiving health care provider sends back the information, the most relevant C-CDA document template may be the “Consultation Note,” which is generated by a request from a clinician for an opinion or advice from another clinician. However, eligible hospitals and CAHs may choose to utilize other documents within the C-CDA to support transitions, for instance the “Discharge Summary” document.

We noted that if the new scoring methodology and measure were finalized, this measure would not have a reporting threshold and if we did not finalize the proposed scoring methodology, we would maintain the current Stage 3 requirements finalized in previous rulemaking. Therefore, eligible hospitals and CAHs would be required report on the Stage 3 Send a Summary of Care measure under the Health Information Exchange objective codified at § 495.24(c)(7)(ii)(A).

Comment: A few commenters supported the name change to Supporting Electronic Referral Loops by Sending Health Information. A few commenters agreed with the focus on patient outcomes with this measure. These commenters believed that the measure focuses on ensuring that the patient’s health data is accurately shared between health care providers thereby improving care coordination and patient outcomes.

Response: We appreciate the support for the name change and focus and believe this reflects our emphasis on improving care coordination and communication between health care providers, as it relates to completing the referral loop. We believe that the emphasis on closing the referral loop will positively influence patient outcomes due to improved exchange of clinically relevant patient health information for care performed by other parties.

Comment: One commenter voiced concerned that many providers do not have interoperable EHRs and sending a summary of care to these providers should not be counted towards meeting requirements under the Promoting Interoperability Program.

Response: We thank the commenter for its feedback. We are committed to the use of certified health IT to effectively support the interoperable electronic exchange across the care continuum. While we recognize that not all of the provider types to whom a hospital or CAH might send a care summary currently use technology certified under the ONC Health IT Certification Program, we believe that it is important that eligible hospitals and CAHs are including these workflows in their everyday practice. Since the beginning of the EHR Incentive Program, hospital efforts to engage in and expand health information exchange across the care continuum have helped to build and evolve health IT infrastructure across the nation. We note that eligible hospitals have achieved near-universal adoption of certified health IT, with 96 percent of Medicare- and Medicaid-participating non-Federal acute care hospitals having adopted certified EHRs with the capability to electronically export a summary of clinical care as of 2015. We also note that there may be many cases where this information is valuable to health care providers even if they are not capable of receiving and incorporating the information when it is transmitted from interoperable health IT according to applicable interoperability standards.

After consideration of the public comments we received, we are finalizing the name change of Send a Summary of Care to Support Electronic Referral Loops by Sending Health Information and codifying this measure at 42 CFR 495.24(e)(6)(ii)(A).

We are finalizing that eligible hospitals and CAHs may use any document template within the C-CDA standard for purposes of the measures under the Health Information Exchange objective.

We are adopting the measure description as proposed, in alignment with the scoring methodology in section VIII.D.5. of the preamble of this final rule:

***Support Electronic Referral Loops by Sending Health Information:*** For at least one transition of care or referral, the eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care: (1) Creates a summary of care record using CEHRT; and (2) electronically exchanges the summary of care record.

We are finalizing the proposal to remove the exclusion from this measure.

(2) Removal of the Request/Accept Summary of Care Measure

In the proposed rule (83 FR 20531), we proposed to remove the Request/Accept Summary of Care measure at § 495.24(c)(7)(ii)(B) under the proposed § 495.24(e)(6).

Our analysis of the existing measure and stakeholder input indicated the measure specification does not effectively identify when health care providers are engaging with other providers of care or care team members to obtain up-to-date patient health information and to subsequently incorporate relevant data into the patient record, resulting in unintended consequences where health care providers implement either:

- A burdensome workflow to document the manual action to request or obtain an electronic record, for example, clicking a check box to document each phone call or similar manual administrative task, or

- A workflow which is limited to only querying internal resources for the existence of an electronic document.

Further, stakeholder feedback highlights the fact that the requirement to incorporate data is insufficiently clear regarding what data must be incorporated.

In addition, as indicated in the proposed rule, stakeholders noted that when approached separately, the incorporate portion of the Request/Accept Summary of Care measure is both inconsistent with and redundant to the Clinical Information Reconciliation measure which causes unnecessary burden and duplicative measure calculation.

Comment: One commenter stated that the removal of this measure would not reduce burden as the Request/Accept Summary of Care measure would be included in the Support Electronic Referral Loops By Receiving and Incorporating Health Information which was thought to be a more complex measure to calculate.

Several commenters disagreed with the new Support Electronic Referrals Loops By Receiving and Incorporating Health Information measure as they believed it is too burdensome under one measure and does not align with their current workflows creating a potential for errors.

A few commenters stated this measure would be more complex and difficult to calculate as it includes multiple actions under one measure. One commenter stated there was not enough time allowed for implementation since it is a new measure and requires testing and certification.

Response: We disagree that removing this measure would not reduce burden.

We believe that the current separation of the Request/Accept Summary of Care measure from the Clinical Information Reconciliation measure is burdensome and redundant in the action of incorporation of the summary of care record. In addition, stakeholder concerns indicated the separate Request/Accept Summary of Care and Clinical Information Reconciliation measures were not reflective of clinical and care coordination workflows.

For instance, under the prior Request/Accept Summary of Care measure, a provider receiving a transition of care was required to obtain the patient's record (if not already received via a Direct message), through querying for the record or a manual request (such as a phone call). Once received, the provider was then required to "incorporate" this information into the patient's record. Each individual action in this process, from querying and requesting to incorporating, had to be tracked for each individual use case in order to calculate the measure. Under the Clinical Information Reconciliation measure, the provider was required to review a record received electronically or by other means, or capture information through verbal discussion with the patient, and then use this information to reconcile the medications, medication allergies, and problem list within the record. As with the Request/Accept Summary of Care measure, each of these actions had to be tracked in order to calculate the measure.

The combined measure, Support Electronic Referral Loops by Receiving and Incorporating Health Information, significantly simplifies these actions, specifying that upon receipt of an electronic record, the provider must reconcile information regarding

medications, medication allergies, and problem list. Rather than tracking individual actions as required by existing measures, this new measure would instead focus on the result of these actions when an electronic summary of care record is successfully identified, received, and reconciled with the patient record. We believe that moving away from the actions requiring manual or other tracking in the existing measures will reduce burden for providers and developers and more closely align with provider workflows.

In addition, with regard to the commenter's concerns about implementation timing, we are establishing an exclusion to this measure for 2019. We believe that all eligible hospitals and CAHs should be able to perform the actions required by this measure by 2020. We also note that this measure aligns with our goals to have a truly interoperable system which includes the free flow of health information between EHR systems.

After consideration of the public comments we received, we are finalizing the removal of the Request/Accept Summary of Care measure as proposed.

### (3) Removal of the Clinical Information Reconciliation Measure

In the proposed rule (83 FR 20532), we proposed to remove the Clinical Information Reconciliation measure at § 495.24(c)(7)(ii)(C) from the new measures at proposed § 495.24(e)(6) to reduce redundancy, complexity, and provider burden.

As discussed in the proposed rule, we believe the Clinical Information Reconciliation measure is redundant in regard to the requirement to “incorporate” electronic summaries of care in light of the requirements of the Request/Accept Summary

of Care measure. In addition, the measure is not fully health IT based as the exchange of health care information is not required to complete the measure action and the measure specification is not limited to only the reconciliation of electronic information in health IT supported workflows. In addition, feedback from hospitals, clinicians, and health IT developers indicates that because the measure is not fully based on the use of health IT to meet the measurement requirements, eligible hospitals and CAHs must engage in burdensome tracking of manual workflows.

Comment: Multiple commenters supported the removal of this measure and stated the removal of this measure would reduce burden.

Response: We appreciate the support and agree that it will help to reduce provider burden and refocus on the use of health IT to meet the measure requirements.

After consideration of the public comments we received, we are finalizing the removal of the Clinical Information Reconciliation measure as proposed.

(4) New HIE Measure: Support Electronic Referral Loops by Receiving and Incorporating Health Information

In the proposed rule (83 FR 20532 through 20533), we proposed to add the following new measure for inclusion in the Health Information Exchange objective at § 495.24(e)(6)(ii)(B): Support Electronic Referral Loops by Receiving and Incorporating Health Information. This measure would build upon and replace the existing Request/Accept Summary of Care and Clinical Information Reconciliation measures.

***Proposed measure name and description: Support Electronic Referral Loops by Receiving and Incorporating Health Information:*** For at least one electronic summary

of care record received for patient encounters during the EHR reporting period for which an eligible hospital or CAH was the receiving party of a transition of care or referral, or for patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient, the eligible hospital or CAH conducts clinical information reconciliation for medication, medication allergy, and current problem list.

We proposed to combine two existing measures, the Request/Accept Summary of Care measure and the Clinical Information Reconciliation measure, in this new Support Electronic Referral Loops by Receiving and Incorporating Health Information measure to focus on the exchange of health care information as the current Clinical Information Reconciliation measure is not reliant on the exchange of health care information nor use of CEHRT to complete the measure action. We did not propose to change the actions associated with the existing measures; rather, we proposed to combine the two measures to focus on the exchange of the health care information, reduce administrative burden, and streamline and simplify reporting.

CMS and ONC worked together to define the following for this measure:

***Denominator:*** Number of electronic summary of care records received using CEHRT for patient encounters during the EHR reporting period for which an eligible hospital or CAH was the receiving party of a transition of care or referral, and for patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient.

**Numerator:** The number of electronic summary of care records in the denominator for which clinical information reconciliation is completed using CEHRT for the following three clinical information sets: (1) Medication – Review of the patient's medication, including the name, dosage, frequency, and route of each medication; (2) Medication allergy – Review of the patient's known medication allergies; and (3) Current Problem List – Review of the patient's current and active diagnoses.

We proposed the denominator would increment on the receipt of an electronic summary of care record after the eligible hospital or CAH engages in workflows to obtain an electronic summary of care record for a transition, referral or patient encounter in which the health care provider has never before encountered the patient and the numerator would increment upon completion of clinical information reconciliation of the electronic summary of care record for medications, medication allergies, and current problems. The eligible hospital or CAH would no longer be required to manually count each individual non-health-IT-related action taken to engage with other providers of care and care team members to identify and obtain the electronic summary of care record. Instead, the measure would focus on the result of these actions when an electronic summary of care record is successfully identified, received, and reconciled with the patient record. We believe this approach would allow eligible hospitals and CAHs to determine and implement appropriate workflows supporting efforts to receive the electronic summary of care record consistent with the implementation of effective health IT information exchange at an organizational level.

Finally, we proposed to apply our existing policy for cases in which the eligible hospital or CAH determines no update or modification is necessary within the patient record based on the electronic clinical information received, and the eligible hospital or CAH may count the reconciliation in the numerator without completing a redundant or duplicate update to the record. We sought public comment on methods by which this specific action could potentially be electronically measured by the provider's health IT system – such as incrementing on electronic signature or approval by an authorized provider – to mitigate the risk of burden associated with manual tracking of the action.

In addition, we sought public comment on methods and approaches to quantify the reduction in burden for eligible hospitals and CAHs implementing streamlined workflows for this proposed measure. We also sought public comment on the impact these proposals may have for health IT developers in updating, testing, and implementing new measure calculations related to these proposed changes. Specifically, we sought public comment on whether ONC should require developers to recertify their EHR technology as a result of the changes proposed, or whether they should be able to make the changes and engage in testing without recertification. Finally, we sought public comment on whether this proposed new measure that combines the Request/Accept Summary of Care and Clinical Information Reconciliation measures should be adopted, or whether either or both of the existing Request/Accept Summary of Care and Clinical Information Reconciliation measures should be retained in lieu of this proposed new measure.

We stated if we finalize the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, an exclusion would be available for eligible hospitals and CAHs that could not implement the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure for an EHR reporting period in CY 2019.

We proposed that we would maintain the current Stage 3 requirements finalized in previous rulemaking if we did not finalize the new scoring methodology proposed in section VIII.D.5. of the preamble of the proposed rule. Therefore, eligible hospitals and CAHs would be required report on the Stage 3 Request/Accept Summary of Care measure and Clinical Information Reconciliation measures under the Health Information Exchange objective codified at § 495.24(c)(7)(ii)(B) and (C).

We also proposed that, in order to meet this measure, an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(1) and (b)(2).

Comment: One commenter supported the exclusion for Support Electronic Referrals Loops by Receiving and Incorporating Health Information.

Response: We appreciate the support and believe the exclusion will benefit health care providers who are unable to implement the measure for an EHR reporting period in 2019 due to additional time needed to perform necessary updates and workflow changes.

Comment: A few commenters requested that CMS not finalize this measure and maintain the Request/Accept Summary of Care information and Clinical Information Reconciliation measures separately. These commenters believed that clinical information

reconciliation presents many challenges including partially automated reconciliation and functionalities for problem list, which require some manual actions. These commenters suggested that the actions required for the combined measure would create a complex workflow and would not result in improved interoperability.

Response: We believe that the current separation of the measures is burdensome and redundant in the action of incorporation of the summary of care record. In addition, we listened to stakeholder concerns regarding the separate Request/Accept Summary of Care and Clinical Information Reconciliation measures, which indicated that the separation between receiving and reconciling patient health information is not reflective of clinical and care coordination workflows and the incorporation aspect is redundant to both measures. We agree the process of clinical information reconciliation includes both automated and manual reconciliation to allow the receiving health care provider to work with both the electronic data provided with any necessary review, and to work directly with the patient to reconcile their health information. We also indicated in previous rulemaking (80 FR 62861) that if no update is necessary, the process of reconciliation may consist of simply verifying that fact or reviewing a record received on referral and determining that such information is merely duplicative of existing information in the patient record, which we believe would reduce burden. In addition, we believe that combining the measures of Request/Accept Summary of Care and Clinical Information Reconciliation retains the focus on interoperability and exchange of health information as opposed to the separation of the measures where health information exchange and interoperability was not a focus for clinical information reconciliation.

Comment: One commenter stated that health care providers should not be held accountable for performance scores that depend on actions of another health care provider to receive credit.

One commenter stated that health care providers are querying for external data but not consistently “closing the referral loop” by sending information back, and recommended automating a closed loop referral workflow process.

Response: We disagree with the commenter’s concern regarding being accountable for another health care provider’s actions. We stated in the proposed rule (83 FR 20516) that we were moving to a new phase of EHR measurement with an increased focus on interoperability and improving patient access to health information. The Health Information Exchange measures focus on interoperability and coordination of care. Therefore, we do not believe health care providers are being held accountable for the actions of another health care provider, rather, we are focusing on improving interoperability and patient outcomes through exchange of health care information. In addition, we note that the denominator language includes “the number of summary of care records received using CEHRT,” therefore, an eligible hospital or CAH would not increment the denominator if a summary of care record was not received; however, we encourage the eligible hospital or CAH to make a reasonable effort to acquire the summary of care, such as a request to the referring provider and a query of any HIE or service. To that end, we believe that if information is not received after a referral, the eligible hospital or CAH who referred the patient should also make a reasonable effort to acquire the summary of care from the referral. We believe this will effectively improve

closing the referral loop after a referral. We believe that in order to have an interoperable system, EHRs should have a free flow of data between systems. We also note that this measure takes into account the entire cycle of care and helps to foster agreement among healthcare providers.

Similarly, we believe that it is up to the referring provider to ensure that they are taking into account the care of their patients in order to make necessary and relevant clinical decisions. We believe that this consolidated measure gets to that end.

We appreciate the commenter's support for efforts to improve processes and technology solutions around closing referral loops. We believe that the measures finalized in this rule will help incentivize further innovation around interoperable exchange of information to support these processes. We also encourage providers to work with health IT developers to pursue products that deliver greater automation around key care coordination functions.

We will continue to collaborate with ONC in future rulemaking on possible functionalities which could support an automated processes for closing the referral loop.

Comment: One commenter stated that there should be a model for incorporation of health information including attachment/incorporation into the record, parse and group. The commenter further added that it should at least require data domains for the summary of care record (Medications, Medication Allergies, Problem Lists) with the ability to compare for duplication and advance informatics analytics against all data from all sources.

Response: Health IT certified to the ONC 2015 Edition criteria at § 170.315(b)(2) will have the model capabilities recommended by the commenter. The ONC 2015 Edition includes requirements for health IT to be capable of the reconciliation and incorporation of health information from multiple sources. Health IT certified to the 2015 Edition must demonstrate that a transition of care/referral summary artifact received by a system can be properly matched to the correct patient, and then simultaneously display (in a single view) the data from at least two sources. The certified health IT must enable a user to create a single reconciled list of each of the following: medications; medication allergies; problems; enable a user to review and validate the accuracy of a final set of data, and with the user's confirmation, automatically update the list, and incorporate the reconciled data. The 2015 Edition requirement is codified at § 170.315(b)(2) (Clinical information reconciliation and incorporation).

Comment: A commenter requested clarification on the definition of a new patient.

Response: As we stated in the proposed rule (83 FR 20532), this measure refers to patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient.

After consideration of the public comments we received, we are finalizing the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure as proposed and codifying this measure at § 495.24(e)(6)(ii)(B). We are finalizing the proposal to apply the existing policy for cases in which the eligible hospital or CAH determines no update or modification is necessary within the patient record

based on the electronic clinical information received, and the eligible hospital or CAH may count the reconciliation in the numerator without completing a redundant or duplicate update to the record.

We are finalizing an eligible hospital or CAH must use the capabilities and standards as defined for CEHRT at 45 CFR 170.315(b)(1) and (b)(2).

We are adopting the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure as follows:

***Measure Description: Support Electronic Referral Loops by Receiving and Incorporating Health Information:*** For at least one electronic summary of care record received for patient encounters during the EHR reporting period for which an eligible hospital or CAH was the receiving party of a transition of care or referral, or for patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient, the eligible hospital or CAH conducts clinical information reconciliation for medication, medication allergy, and current problem list.

***Denominator:*** Number of electronic summary of care records received using CEHRT for patient encounters during the EHR reporting period for which an eligible hospital or CAH was the receiving party of a transition of care or referral, and for patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient.

***Numerator:*** The number of electronic summary of care records in the denominator for which clinical information reconciliation is completed using CEHRT for the following three clinical information sets: (1) Medication – Review of the patient's

medication, including the name, dosage, frequency, and route of each medication;

(2) Medication allergy – Review of the patient's known medication allergies; and

(3) Current Problem List – Review of the patient's current and active diagnoses.

We are finalizing an exclusion for eligible hospitals and CAHs that could not implement the Support Electronic Referral Loops by Receiving and Incorporating Health Information measure for an EHR reporting period in CY 2019.

d. Final Policy for the Provider to Patient Exchange Objective

The Provider to Patient Exchange objective for eligible hospitals and CAHs builds upon the goal of improved access and exchange of patient health information, patient centered communication and coordination of care using CEHRT. In section VIII.D.5. of the preamble of the proposed rule, we proposed to rename the Patient Electronic Access to Health Information objective to Provider to Patient Exchange, remove the Patient Specific Education measure and rename the Provide Patient Access measure to Provide Patients Electronic Access to Their Health Information. In addition, we proposed to remove the Coordination of Care through Patient Engagement objective and all associated measures. The existing Stage 3 Patient Electronic Access to Health Information objective includes two measures under § 495.24(c)(5)(ii) and the existing Stage 3 Coordination of Care through Patient Engagement objective includes three measures under § 495.24(c)(6)(ii).

We reviewed the existing Stage 3 requirements and determined that the proposals for the Patient Electronic Access to Health Information objective and Coordination of Care through Patient Engagement objective could reduce program complexity and burden

and better focus on leveraging the most current health IT functions and standards for patient flexibility of access and exchange of health information. We proposed the Provider to Patient Exchange objective would include one measure, the existing Stage 3 Provide Patient Access measure, which we proposed to rename to Provide Patients Electronic Access to Their Health Information. In addition, we proposed to revise the measure description for the Provide Patients Electronic Access to Their Health Information measure to change the threshold from more than 50 percent to at least one unique patient in accordance with the proposed scoring methodology proposed in section VIII.D.5. of the preamble of the proposed rule. As discussed in section VIII.D.6.a. of the preamble of the proposed rule, we proposed to remove the exclusion for the Provide Patients Electronic Access to Their Health Information measure.

We proposed that if we finalized the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, we would remove all of the other measures currently associated with the Patient Electronic Access to Health Information objective and the Coordination of Care through Patient Engagement objective.

We stated that if we did not finalize the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, we would maintain the existing Stage 3 requirements finalized in previous rulemaking as outlined in the table in that section which describes Stage 3 objectives and measures if new scoring methodology is not finalized. Therefore, we would retain the existing Patient Electronic Access to Health Information objective, associated measures and exclusions under § 495.24(c)(5) and the

existing Coordination of Care through Patient Engagement objective, associated measures and exclusions under § 495.24(c)(6).

(1) Modifications to Provide Patient Access Measure

In the proposed rule (83 FR 20534), we proposed to change the name of the Provide Patient Access measure at 42 CFR 495.24(c)(5)(ii)(A) to Provide Patients Electronic Access to Their Health Information at proposed 42 CFR 495.24(e)(7)(ii) (in the proposed rule (83 FR 20534), we inadvertently referred to 42 CFR 495.24(e)(7)(ii)(A)) to better reflect the emphasis on patient engagement in their health care and patient's electronic access of their health information through use of APIs. We proposed to change the measure description only to remove the previously established threshold from Stage 3, in alignment with our proposed implementation of a performance-based scoring methodology, to require that the eligible hospital or CAH provide timely access for viewing, downloading or transmitting their health information for at least one unique patient discharged using any application of the patient's choice.

***Proposed name and measure description: Provide Patients Electronic Access to Their Health Information:*** For at least one unique patient discharged from the eligible hospital or CAH inpatient or emergency department (POS 21 or 23):

- The patient (or the patient authorized representative) is provided timely access to view online, download, and transmit his or her health information; and
- The eligible hospital or CAH ensures the patient's health information is available for the patient (or patient-authorized representative) to access using any

application of their choice that is configured to meet the technical specifications of the API in the eligible hospital or CAH's CEHRT.

We proposed to change the measure name to emphasize electronic access of patient health information as opposed to use of paper based actions in accordance with the 2015 EHR Incentive Programs final rule policy for Stage 3 to discontinue inclusion of paper based formats and limit the focus to only health IT solutions to encourage adoption and innovation in use of CEHRT (80 FR 62783 through 62784). In addition, we are committed to promoting patient engagement with their health care information and ensuring access in an electronic format upon discharge from the eligible hospital or CAH.

We noted that under the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, measures would not have required thresholds for reporting. Therefore, if the new scoring methodology and measure were finalized, this measure would not have a reporting threshold. We stated that if we did not finalize the proposed scoring methodology, we would maintain the existing Stage 3 requirements finalized in previous rulemaking. Therefore, eligible hospitals and CAHs would be required report on the Stage 3 Provide Patient Access measure under the Patient Electronic Access to Health Information objective codified at § 495.24(c)(5)(ii)(A).

Comment: Several commenters supported the renaming of the measure as proposed.

Response: We thank the commenters for their support and believe the name change effectively focuses the electronic aspect of the measure and our focus on leveraging advanced used of health IT.

Comment: One commenter indicated concern over the current software available for this objective, which results in difficult and burdensome record submission and patient access. The commenter recommended vendor-specific regulations to address the software concern that does not increase costs for health care providers.

Response: We appreciate the commenter's feedback and have emphasized increasing interoperability, burden reduction and improving patient's electronic access to their health information. We believe that the new functionalities of the 2015 Edition such as the health care provider's ability to make patient data accessible through an API to other third party applications, will increase interoperability as well as communication and information between providers and patients. We will continue to review program requirements and work with our partners to focus on burden reduction.

Comment: One commenter recommended that eligible hospitals and CAHs should be required to share all results with patients through the use of API functionality and that failure to do so should be considered to be information blocking. One commenter felt that eligible hospitals and CAHs should not be able to turn off any API functionality which could limit patient access to their health care information.

Response: Patients should be able to access their health information on demand, and we encourage health care providers to maintain the appropriate functionalities for patient access to their health information at all times unless the system is undergoing scheduled maintenance, which should be limited to the least amount of time necessary to perform the maintenance. Furthermore, we noted in previous rulemaking (80 FR 62779) that the actions and workflows that support the requirements of the EHR Incentive

Programs are intended to be in effect continuously, not enabled and implemented for only 90 days.

Comment: One commenter supported no longer including paper-based methods in measure calculations.

Response: We thank the commenter for the support and believe the removal of paper-based actions in part supports the discontinuation of manual paper-based calculation and chart abstraction and leverages the advanced use of CEHRT.

Comment: A commenter recommended an exclusion for the Provide Patients Electronic Access to Their Health Information measure for eligible hospitals and CAHs that cannot successfully identify an app that meets the security needs of their system.

Response: We decline to implement exclusion criteria for the Provide Patients Electronic Access to Their Health Information measure as we believe eligible hospitals and CAHs should work with their health IT vendors to identify applications that meet their security needs.

Comment: A commenter requested that the definition of “timely” should be increased to 72 hours from 36 hours.

Response: We decline to change the definition of “timely” and note that providing patients access to their health information is a top priority for the program and we have not received compelling evidence to indicate that 36 hours is not feasible. We continue to believe that 36 hours is a reasonable timeframe because it allows for immediate access and a reasonable amount of time for health care providers to review

any information necessary before it is made available to the patient as provided in previous rulemaking (80 FR 62813 through 62814).

Comment: A commenter requested that CMS provide privacy language and guidance that health care providers can use to present to patients who choose to access their health information via an API.

Response: A resource titled “Key Privacy and Security Considerations for Healthcare Application Programming Interfaces (APIs)” dated December 2017 is available on ONC’s <https://www.HealthIT.gov> website and includes information on this issue. We refer readers to additional resources that may be useful from the HHS Office for Civil Rights through the “HIPAA for Individuals” selection under the “HIPAA - Health Information Privacy” selection at the <https://www.hhs.gov/> website.

Comment: One commenter requested that CMS address parental/guardian proxy rights related to a child’s personal health information, privacy rights, and adolescent confidentiality. The commenter also requested clarification on the definition of “timely access” specific to pediatric providers.

Response: We did not make specific proposals related to parental/guardian proxy rights, privacy rights, and adolescent confidentiality, and we encourage the commenter to consult existing sources of applicable law with regard to these topics. We did not propose to change the definition of “timely access” to health care information under this rule and the definition will remain within 36 hours as finalized in the 2015 EHR Incentive Programs final rule (80 FR 62813 through 62814).

Commenter: One commenter stated electronic connectivity for sharing of records is optimal but not always possible — and never will be. The commenter further stated that even while there is movement to a more efficient, interoperable system, there will still be myriad situations from frontier health care delivery to computer failure that require a "paper" alternative and that many of these situations are critical for the patient involved.

Response: We appreciate the commenter's concerns and understand that health care providers have an obligation to do their best to serve patients even during times of minor disruptions, such as a computer downtime or failure, or in major dislocations, such as those that may result from natural disasters. Therefore, contingency planning is prudent for continuity of all essential aspects of health care services, including the electronic health record. One available resource to assist with this issue is the ONC Safety Assurance Factors for EHR Resilience (SAFER) Guides (<https://www.healthit.gov/topic/safety/safer-guides>), specifically the Contingency Planning Guide ([https://www.healthit.gov/sites/default/files/safer/guides/safer\\_contingency\\_planning.pdf](https://www.healthit.gov/sites/default/files/safer/guides/safer_contingency_planning.pdf)). This guide identifies recommended safety practices associated with planned or unplanned EHR unavailability—instances in which clinicians or other end users cannot access all or part of the EHR and provides useful recommendations from backup procedures for potential clinical or administrative data loss to recommendations around use of paper forms to replace key EHR functions during downtimes.

Comment: Multiple commenters requested that the measure should allow health care providers to offer access to at least one application or limit applications to ones deemed secure by the healthcare provider rather than any application configured to meet the technical specifications of the API in the CEHRT.

Response: It was not our intent to imply that eligible hospitals and CAHs and their technology suppliers would not be permitted to take reasonable steps to protect the privacy and security of their patients' information. Such measures might include vetting application developers prior to allowing their applications to connect to the API functionality of the provider's health IT. We also remind stakeholders that even in the case where a health care provider or its CEHRT developer/vendor chooses not to vet application developers, any application would not have unmitigated access to data in the health care provider's CEHRT. To the contrary, each application should be registered and thus be identifiable so that the health care provider, or their CEHRT developer/vendor that supplies the API technology to the provider, can deactivate any application's access if the application functions in anomalous or malicious ways (for example, denial of service attack). We also anticipate that a patient seeking access to their data using any application may need to authenticate (using credentials previously issued by a healthcare provider or trusted source) and authorize the application to connect to the API server. In addition, the measure does not require that the eligible hospital or CAH provide an application for its patients' use.

Comment: A few commenters requested that CMS slow the implementation and requirements for use of APIs secondary to risks for systems security and confidentiality of health information.

Response: We believe that we are moving along with the current implementation of APIs and as a result are revising elements of the Promoting Interoperability Programs to take into account the new innovations. In addition, we believe that we are providing ample time for health care providers to incorporate the necessary system securities and confidentiality provisions.

Comment: A commenter recommended creation of a site, list or address where health care providers may report and obtain information on suspicious applications.

Response: We appreciate the commenter's recommendation, and we refer readers to the Health IT Feedback submission mechanism, at:

<https://www.healthit.gov/form/healthit-feedback-form>.

Comment: A few commenters requested additional guidance on how information blocking requirements would be viewed in relation to security of systems with use of APIs, specifically that health care provider determination of an unsecure API should not fall under information blocking.

Response: We thank the commenters for the input and will continue to consider how any policy related to information blocking should treat issues involving the use of APIs.

Comment: One commenter stated that CMS should work with ONC to specify required standards for API access to promote evolution of relevant patient facing applications.

Response: We thank the commenter for the input and will continue to work across HHS and with partners on API standards to support patient access to their electronic health information.

After consideration of the public comments we received, we are finalizing the Provide Patients Electronic Access to Their Health Information measure as proposed and codifying this measure at 42 CFR 495.24(e)(7)(ii).

We are finalizing the measure description in alignment with the scoring methodology in section VIII.D.5. of the preamble of this final rule:

***Measure description: Provide Patients Electronic Access to Their Health***

***Information:*** For at least one unique patient discharged from the eligible hospital or CAH inpatient or emergency department (POS 21 or 23):

- The patient (or the patient authorized representative) is provided timely access to view online, download, and transmit his or her health information; and
- The eligible hospital or CAH ensures the patient's health information is available for the patient (or patient-authorized representative) to access using any application of their choice that is configured to meet the technical specifications of the API in the eligible hospital or CAH's CEHRT.

## (2) Removal of the Patient Generated Health Data Measure

In the proposed rule (83 FR 20534), we proposed to remove the Patient Generated Health Data (PGHD) measure at 42 CFR 495.24(c)(6)(ii)(C) at proposed § 495.24(e)(7) to reduce complexity and focus on the goal of using advanced EHR technology and functionalities to advance interoperability and health information exchange.

As finalized in the 2015 EHR Incentive Programs final rule (80 FR 62851), the measure is not fully health IT based as we did not specify the manner in which health care providers would incorporate the data received. Instead, we finalized that health care providers could work with their EHR developers to establish the methods and processes that work best for their practice and needs. We indicated that this could include incorporation of the information using a structured format (such as an existing field in the EHR or maintaining an isolation between the data and the patient record such as incorporation as an attachment, link or text reference which would not require the advanced use of CEHRT. We note that although this measure requires use of the 2015 Edition, it does not require key updates to functions and standards of health IT, therefore, it does not align with the current program goals of improving interoperability, prioritizing actions completed electronically and use of advanced CEHRT functionalities.

Comment: Several commenters supported the removal of the measure indicating the standards and processes were immature.

Response: We agree that the Patient Generated Health Data did not focus on the advanced use of CEHRT as it was not fully health IT-based nor were the actions associated with the measure fully electronic and may have included paper-based actions,

which did not align with the focus of Stage 3 to remove paper based actions. In addition, stakeholder feedback we received through correspondence and listening sessions indicated there was confusion related to the types of data that would be applicable and the situations in which the patient data would apply. We also believe removal of this measure will decrease reporting burden as it could require aspects of manual processes to incorporate the data and did not focus on the advanced use of CEHRT.

Comment: One commenter requested that CMS retain the functionality of this measure if removed due to the benefits of receiving patient generated health data.

Response: We have previously stated to healthcare providers in rulemaking (80 FR 62786) that functions and standards related to measures that are no longer required for the Promoting Interoperability Programs could still hold value for some healthcare providers and may be utilized as best suits their practice and the preferences of their patient population. The removal of measures is not intended to discourage the use of the standards, the implementation of best practices, or conducting and tracking the information for providers' own quality improvement goals.

After consideration of the public comments we received, we are finalizing the removal of this measure as proposed.

### (3) Removal of the Patient-Specific Education Measure

In the proposed rule (83 FR 20534), we proposed to remove the Patient-Specific Education measure at § 495.24(c)(5)(ii)(B) at proposed § 495.24(e)(7) as it has proven burdensome to eligible hospitals and CAHs in ways that were unintended and detract from health care providers' progress on current program priorities.

We believe that the Patient-Specific Education measure does not align with the current emphasis of the Medicare Promoting Interoperability Program to increase interoperability, leverage the most current health IT functions and standards or reduce burden for eligible hospitals and CAHs. For example, the Patient-Specific Education measure's primary focus is on use of CEHRT for patient resources specific to their health care and diagnosis as well as patient centered care. However, the education resources do not need to be maintained within or generated by CEHRT. Therefore, even though the CEHRT identifies the patient educational resources, the process to generate them could take additional time and interrupt health care provider's workflows. In addition, there could be redundancy in providing educational materials based on resources identified by the CEHRT as CEHRT identifies educational resources using the patient's medication list and problem list but can also include other elements as well. If there are no changes to a patient's health status or treatment based on his or her health care information, there would likely be many resources and materials that present the same type of information and could increase burden to the health care provider in seeking additional resources to provide.

Comment: A few commenters recommended keeping the Patient-Specific Education measure as research conducted indicates the measure improves patient outcomes and improves quality of care, and reduces costs through patient knowledge of their health conditions. In addition, the commenters indicated the Patient-Specific Education measure instantly produces materials for patients increasing efficiency and lowering costs associated with manual procurement of those materials.

Response: We disagree that the Patient-Specific Education measure should be retained as a required measure. While we believe that there are merits to the Patient-Specific Education measure, we affirm our position that the Patient-Specific Education measure does not align with the current emphasis of the Medicare Promoting Interoperability Program which aims to increase interoperability, leverage the most current health IT functions and standards and reduce burden for eligible hospitals and CAHs. In addition, as we stated in the proposed rule (83 FR 20525), although the measure would no longer be required for reporting, eligible hospitals and CAHs may continue to use the standards and functions of those measures no longer required for successful demonstration of meaningful use if they are beneficial for them. We believe that if health care providers find value in the Patient-Specific Education measure, they will continue to use the standards and functions, even if not required.

Comment: A few commenters supported the removal of the Patient-Specific Education measure, but stated that CMS should encourage use of its functionality.

Response: We thank the commenters for their support of the removal. As we indicated in the preceding response, providers may choose to continue to use the functionalities that support the measure even if the measure is no longer required.

After consideration of the public comments we received, we are finalizing the removal of this measure as proposed.

#### (4) Removal of the Secure Messaging Measure

In the proposed rule (83 FR 20534 through 20535), we proposed to remove the Secure Messaging measure at § 495.24(c)(6)(ii)(B) at proposed § 495.24(e)(7) as it has

proven burdensome to eligible hospitals and CAHs in ways that were unintended and detract from health care providers' progress on current program priorities.

Secure Messaging was finalized as a Stage 3 measure for eligible hospitals and CAHs in the 2015 EHR Incentive Programs final rule with the intent to build upon the Stage 2 policy goals of using CEHRT for provider-patient communication (80 FR 62841 through 62849). As mentioned above, we believe that Secure Messaging does not align with the current emphasis of the Medicare Promoting Interoperability Program to increase interoperability or reduce burden for eligible hospitals and CAHs.

In addition, we believe there is burden associated with tracking secure messages, including the unintended consequences of workflows designed for the measure rather than for clinical and administrative effectiveness. We believe that because this measure is not required under Modified Stage 2, removal would not negatively impact patient engagement nor care coordination and serve to decrease burden.

In addition, after further review, we believe that this measure may not be practical for eligible hospitals and CAHs as the patient would likely receive follow up care from another health care provider such as the patient's primary care physician, a rehabilitation facility, or home health after discharge. The patient would communicate with those health care providers instead of the hospital for information related to their health post-discharge.

Comment: A few commenters supported the removal of the secure messaging measure, indicating it would be burdensome to eligible hospitals and CAHs as follow up should be conducted with the health care provider the patient is transitioning to.

Response: We thank the commenters for their support. We agree this measure would detract from health care providers' progress on current program priorities and follow up after discharge should be with the health care provider to whom the patient's care is transitioned such as the patient's primary care provider, a rehabilitation facility, or home health provider. The patient would communicate with those health care providers instead of the hospital for information related to their health post-discharge.

After consideration of the public comments we received, we are finalizing the removal of this measure as proposed.

#### (5) Removal of the View, Download or Transmit Measure

In the proposed rule (83 FR 20535), we proposed to remove the View, Download or Transmit measure at § 495.24(c)(6)(ii)(A) at proposed § 495.24(e)(7) as it has proven burdensome to eligible hospitals and CAHs in ways that were unintended and detract from eligible hospitals and CAHs progress on current program priorities.

We received health care provider and stakeholder feedback through correspondence, public forums, and listening sessions indicating there is ongoing concern with measures which require patient action for successful attestation. We have noted that data analysis on the patient action measures supports stakeholder concerns regarding the barriers that exist, which impact a provider's ability to meet the measure. We note that we have heard from these stakeholders that certain demographics of their patient populations which may include low-income, patients in rural areas, and an aging population, all contribute to the barriers of not having access to computers, Internet and/or email. These barriers have resulted in certain patient actions measures being

outside of the purview and control of the health care provider. They have also noted that this particular population is concerned with having their health information online. After additional review, we note that successful attestation predicated solely on a patient's action has inadvertently created burdens to health care providers and detracts from progress on the Promoting Interoperability Program's measure goals of focusing on patient care, interoperability and leveraging advanced use of health IT. Therefore, we proposed to remove the View, Download or Transmit measure.

Comment: Many commenters supported removal of the View, Download or Transmit measure as proposed.

Response: We appreciate support for removal of the measure. Previous stakeholder feedback through correspondence, public forums, and listening sessions indicated there is ongoing concern with measures which require health care providers to be accountable for patient actions such as VDT. We further understand that there are barriers which could negatively impact an eligible hospital or CAHs ability to successfully meet a measure requiring patient action, such as location in remote, rural areas and access to technology including computers, Internet and/or email. As the issues described contribute to reporting burden and could negatively impact an eligible hospital or CAHs successful demonstration in the Promoting Interoperability Programs, we agree that removing the patient action measures will allow for focus on program goals of increasing interoperability and patient access to their health information.

After consideration of the public comments we received, we are finalizing the removal of this measure as proposed.

e. Modifications to the Public Health and Clinical Data Registry Reporting Objective and Measures

In connection with the new scoring methodology we proposed in section VIII.D.5. of the preamble of proposed rule (83 FR 20535 through 20536), we proposed changes to the Public Health and Clinical Data Registry Reporting objective and six associated measures under 42 CFR 495.24(c)(8)(ii)(A) through (F) in proposed 42 CFR 495.24(e)(8) (in the proposed rule (83 FR 20535), we inadvertently referred to 42 CFR 495.24(e)(7)). We believe that public health reporting through EHRs will extend the use of electronic reporting solutions to additional events and care processes, increase timeliness and efficiency of reporting and replace manual data entry.

We proposed to change the name of the objective to Public Health and Clinical Data Exchange. Under the new scoring methodology proposed in section VIII.D.5. of the preamble of the proposed rule, in aligning with our goal to increase flexibility, improve value, and focus on burden reduction, we proposed that eligible hospitals and CAHs would be required to attest to the Syndromic Surveillance Reporting measure and at least one additional measure from the following options: Immunization Registry Reporting; Clinical Data Registry Reporting; Electronic Case Reporting; Public Health Registry Reporting; and Electronic Reportable Laboratory Result Reporting.

We proposed to require the Syndromic Surveillance Reporting measure under the Public Health and Clinical Data Exchange objective because the CDC indicates the primary source of data for syndromic surveillance comes from EHRs in emergency care settings. Typically, EHR data transmitted from health care facilities to public health

agencies for syndromic surveillance are not filtered or categorized. As a result, public health agencies can use the same data that support delivery of care for an all-hazards surveillance approach.

In addition, syndromic surveillance reporting via CEHRT leverages the wealth and depth of clinical information that has not been captured before to study emerging health conditions like the rising opioid overdose epidemic. The data will also provide a unique opportunity to examine rare conditions and new procedures.

While we believe that it is important to leverage health IT through advanced use of CEHRT, for public health and clinical data registries reporting, we also want to reduce burden. Through stakeholder feedback, we understand that some of the existing active engagement requirements are complicated and confusing, and contributed to unintended burden due to issues related to readiness or onboarding for electronic exchange with registries. Therefore, under the new scoring methodology proposed in section VIII.D.5. of the preamble of the proposed rule, we proposed to require attestation to only two measures under the Public Health and Clinical Data Exchange objective instead of three, which is currently required under Stage 3.

In addition, we stated that we intend to propose in future rulemaking to remove the Public Health and Clinical Data Exchange objective and measures no later than CY 2022, and sought public comment on whether hospitals will continue to share such data with public health entities once the Public Health and Clinical Data Exchange objective and measures are removed, as well as other policy levers outside of the Promoting Interoperability Program that could be adopted for continued reporting to

public health and clinical data registries, if necessary. Therefore, we are also interested in identifying other appropriate venues in which reporting to public health and clinical data registries could be reported. We sought public comment on the role that each of the public health and clinical data registries should have in the future of the Promoting Interoperability Programs and whether the submission of this data should still be required when the incentive payments for meaningful use of CEHRT will end in 2021.

Lastly, we sought public comment on whether the Promoting Interoperability Programs are the best means for promoting the sharing of clinical data with public health entities.

In the proposed rule, we stated that if we did not finalize the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule, we would maintain the existing Stage 3 requirements finalized in previous rulemaking and outlined in the table in that section which describes Stage 3 objectives and measures. Therefore, we would retain the existing Public Health and Clinical Data Registry Reporting objective and associated measures and exclusions under § 495.24(c)(8).

Comment: Many commenters requested that eligible hospitals and CAHs be able to report on any two measures to meet the Public Health and Clinical Data Exchange objective, and disagreed with the proposed requirement to report on the Syndromic Surveillance Reporting measure and one other measure because they indicated not all eligible hospitals can report on the Syndromic Surveillance Reporting measure because some States do not accept Syndromic Surveillance files.

Response: We understand the concerns of the commenters and are committed to reducing provider burden while increasing flexibility. We believe the ability to report on any two measures associated with the objective would promote flexibility in reporting and enables eligible hospitals and CAHs to focus on the measures that are most relevant to them and their patient population. In addition, we understand that some eligible hospitals and local jurisdictions are not able to send and receive Syndromic Surveillance files, including Oklahoma, Iowa, Minnesota and some counties in Colorado. With the ability to report on any two measures, eligible hospitals and CAHs will not have to claim an exclusion if they are unable to report on the Syndromic Surveillance Reporting measure. Rather, they will be able to select measures they have the ability to report on and therefore not claim exclusions, unless necessary. For these reasons, we are finalizing our proposal with the modification to allow eligible hospitals and CAHs to choose any two measures associated with the Public Health and Clinical Data Exchange objective to report. We will continue to monitor the ability of health care providers to report on Syndromic Surveillance Reporting measures and consider requiring Syndromic Surveillance reporting in future rulemaking.

Comment: One commenter agreed with the Public Health and Clinical Data Exchange reporting requirements proposed, stating it would continue to advance interoperability and improve early detection of outbreaks as well as promote population health strategies.

Response: We appreciate the supportive comments and reiterate that our priority is to improve the flexibility of the Promoting Interoperability Programs, reducing the

reporting burden and promoting interoperability between health care providers and health IT systems.

Comment: A few commenters inquired why the Syndromic Surveillance Reporting measure was proposed as a required measure.

Response: We worked in conjunction with the CDC and ONC to identify public health reporting requirements that would be valuable to eligible hospitals and CAHs. As discussed in the proposed rule (83 FR 20535 through 20536), the CDC indicated the primary source of syndromic surveillance data comes from EHRs in emergency care settings and reporting via CEHRT has been instrumental in the capture and study of emerging health conditions such as the opioid overdose epidemic. In addition, syndromic surveillance reporting has improved data collection efforts resulting in the ability of public health agencies to more closely monitor trends in emergency department visits with greater precision and allowing communities to respond to emerging health threats more expeditiously.

Comment: One commenter stated that changes to the reporting requirements has resulted in less emphasis on Immunization Registry Reporting.

Response: We disagree that changes to the reporting requirements have resulted in less emphasis on immunization reporting. Instead, EHR data has improved efficiencies of reporting from health care providers to immunization registries. For example providers no longer have to duplicate data entry into a website for the IIS and their EHR system as the data is directly sent from the EHR to the registry. Although we proposed to reduce reporting from three measures to two measures with Syndromic

Surveillance Reporting being required as one of the measures, eligible hospitals and CAHs would have the ability to select Immunization Registry Reporting as the other measure. In addition, eligible hospitals and CAHs may attest to additional Public Health and Clinical Data Exchange measures; however, reporting on additional measures would not increase their score.

Comment: A few commenters requested that CMS retain or increase the current public health reporting requirements for eligible hospitals and CAHs of attesting to at least three public health measures or as many as four as they believe reducing the amount of required measures de-emphasizes this objective.

One commenter requested CMS limit the Public Health and Clinical Data Exchange measure reporting requirements to one measure to further reduce reporting burden.

Response: We decline to increase the reporting requirements for the Public Health and Clinical Data Exchange objective. As we had stated in the proposed rule (83 FR 20535), our goals include increasing flexibility, improving value and reducing burden to providers. In addition, based on stakeholder feedback, we understand the active engagement requirements were complicated or confusing, therefore we are reducing provider burden through requiring attestation to only two measures. We reiterate that eligible hospitals and CAHs may attest to additional measures under the Public Health and Clinical Data Exchange objective; however it would not increase their score.

We decline to reduce the required number of measures for reporting to one Public Health and Clinical Data Exchange measure. While we are focusing on increasing flexibility, improving value and reducing burden to providers, we also want to balance those goals with maintaining communication and value in public health registry and bidirectional data exchange between providers and public health agencies and clinical data registries.

Comment: Many commenters strongly opposed CMS intent to remove public health measures in the future of the program as they believed that interoperability of public health data is still evolving and incentivizes health care providers to share data with public health agencies.

Response: We appreciate the feedback and understand the importance of reporting to public health and clinical data registries. We are continuing to focus on burden reduction as well as other platforms and venues for reporting data to public health and clinical data registries outside of the Promoting Interoperability Programs. We will continue to monitor the data we compile specific to the public health reporting requirements and take the commenters' concerns into consideration related to future actions.

Comment: One commenter indicated that the Public Health and Clinical Data Exchange objective should include additional methods for data capture or reporting.

Response: Certification criteria and standards that support the Public Health and Clinical Data Exchange measures are established by ONC and we will work with them on future considerations for the Promoting Interoperability Programs.

Comment: A few commenters requested clarification on whether claiming an exclusion would count toward meeting the objective. A few commenters requested clarification regarding whether a health care provider needed to select another measure to report on if claiming an exclusion.

Response: For the Public Health and Clinical Data Exchange objective, health care providers are only required to attest to two measures total, regardless of whether an exclusion is claimed. Therefore, for example, a health care provider could attest to the Immunization Registry Reporting measure and claim an exclusion for the Electronic Case Reporting measure and meet the requirements for the objective. Providers may attest to additional Public Health and Clinical Data Exchange measures if they choose to; however, it would not increase their overall score for the objective. For additional information on the reporting and scoring methodology, we refer readers to section VIII.D.6. of the preamble of this final rule.

Comment: One commenter requested that the public health measures should change from a yes/no response to reporting on the number of times a health care provider shares unique patient clinical data with public health entities regarding each of the six measures within the Public Health and Clinical Data exchange objective.

Response: We decline to revise the attestation response for the Public Health and Clinical Data Exchange objective. We believe changing the attestation response would cause confusion and possibly increase burden to health care providers who are familiar with the current attestation process.

After consideration of the public comments we received, we are finalizing the Public Health and Clinical Data Exchange objective proposals as proposed with the following modification, as discussed above.

We are finalizing the objective name change from Public Health and Clinical Data Registry Reporting to Public Health and Clinical Data Exchange and to codify this change at 42 CFR 495.24(c)(8)(ii)(A) through (F).

We are modifying our proposed policy and finalizing that eligible hospitals and CAHs must report on any two Public Health and Clinical Data Exchange measures of their choice.

f. Request for Comment - Potential New Measures for HIE Objective: Health Information Exchange Across the Care Continuum

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20536 through 20537), we sought public comment on a potential concept for two additional measure options for the Health Information Exchange objective for eligible hospitals and CAHs who refer or transition care of patients to health care providers in long-term care and postacute care settings, skilled nursing facilities, and behavioral health settings. Many current Promoting Interoperability Program participants are now engaged in bi-directional exchange of patient health information with these health care providers and settings of care and many more sought to incorporate these workflows as part of efforts to improve care team coordination or to support alternative payment models.

For these reasons, we sought public comment on two potential new measures for inclusion in the program to enable eligible hospitals and CAHs to exchange health

information through health IT supported care coordination across a wide range of settings.

***New Measure Description for Support Electronic Referral Loops by Sending Health Information Across the Care Continuum:*** For at least one transition of care or referral to a provider of care other than an eligible hospital or CAH, the eligible hospital or CAH creates a summary of care record using CEHRT; and electronically exchanges the summary of care record.

***New Measure Denominator:*** Number of transitions of care and referrals during the EHR reporting period for which the eligible hospital or CAH inpatient or emergency department (POS 21 or 23) was the transitioning or referring provider to a provider of care other than an eligible hospital or CAH.

***New Measure Numerator:*** The number of transitions of care and referrals in the denominator where a summary of care record was created and exchanged electronically using CEHRT.

***New Measure Description for Support Electronic Referral Loops by Receiving and Incorporating Health Information Across the Care Continuum:*** For at least one electronic summary of care record received by an eligible hospital or CAH from a transition of care or referral from a provider of care other than an eligible hospital or CAH, the eligible hospital or CAH conducts clinical information reconciliation for medications, medication allergies, and problem list.

***New Measure Denominator:*** The number of electronic summary of care records received for a patient encounter during the EHR reporting period for which an eligible

hospital or CAH was the recipient of a transition of care or referral from a provider of care other than an eligible hospital or CAH.

***New Measure Numerator:*** The number of electronic summary of care records in the denominator for which clinical information reconciliation was completed using CEHRT for the following three clinical information sets: (1) Medication--Review of the patient's medication, including the name, dosage, frequency, and route of each medication; (2) Medication allergy--Review of the patient's known medication allergies; and (3) Current Problem List--Review of the patient's current and active diagnoses.

We sought public comment on whether these two measures should be combined into one measure so that an eligible hospital or CAH that is engaged in exchanging health information across the care continuum may include any such exchange in a single measure. We sought public comment on whether the denominators should be combined to a single measure including both transitions of care from a hospital and transitions of care to a hospital. We also sought public comment on whether the numerators should be combined to a single measure including both the sending and receiving of electronic patient health information. We sought public comment on whether the potential new measures should be considered for inclusion in a future program year or whether stakeholders believe there is sufficient readiness and interest in these measures to adopt them as early as 2019. For the purposes of focusing the denominator, we sought public comment regarding whether the potential new measures should be limited to transitions of care and referrals specific to long-term and postacute care, skilled nursing care, and behavioral health care settings. We also sought public comment on whether additional

settings of care should be considered for inclusion in the denominators and if a provider should be allowed to limit the denominators to a specific type of care setting based on their organizational needs, clinical improvement goals, or participation in an alternative payment model. Finally, we sought public comment on the impact the potential new measures may have for health IT developers to develop, test, and implement a new measure calculation for a future program year.

Comment: Many commenters opposed the addition of this type of measure as they believed that the current measures in the Health Information Exchange objective accurately capture the exchange of health information to other settings such as long term care facilities and an additional measure such as this would be redundant. Other commenters requested that CMS to convene stakeholder discussions with health care providers who would be included in this type of measure to identify what data elements are most valuable for them. Some commenters provided feedback that adoption of CERHT in postacute care settings could be a slow process. One commenter recommended that CMS focus on adoption of CEHRT in postacute care settings under the PFS rulemaking.

In addition, commenters asked specific follow up questions regarding what providers of care would be included, and how CMS would develop the care setting elements into the measure.

Response: We thank the commenters and we will consider their views as we develop future policy regarding the potential new measures that focus on health information exchange across the care continuum.

## 7. Application of Final Scoring Methodology and Measures Under the Medicaid Promoting Interoperability Program

As indicated in sections VIII.D.5. and VIII.D.6. of the preamble of the proposed rule (83 FR 20518 through 20537), we did not propose to require States to adopt the new scoring methodology and measures that we proposed. Instead, we proposed to give States the option to adopt the new scoring methodology we proposed in section VIII.D.5. of the preamble of the proposed rule together with the measures proposals included in section VIII.D.6. of the preamble of the proposed rule for their Medicaid Promoting Interoperability Programs. Any State that wishes to exercise this option must submit a change to its State Medicaid HIT Plan (SMHP) for CMS' approval, as specified in § 495.332. If a State chooses not to submit such a change, or if the change is not approved, the objectives, measures, and scoring would remain the same as currently specified under § 495.24. We believe that States are unlikely to choose this option due to concerns with burden, time constraints and costs associated with implementing updates to technology and reporting systems, as very few eligible hospitals will be eligible to receive an incentive payment under the Medicaid Promoting Interoperability Program in 2019 and subsequent years. However, our proposal to extend this option to States would allow them flexibility to benefit from the improvements to meaningful use scoring outlined in the proposed rule, if they so choose. Similarly, in the proposed rule, we also requested public comment on whether we should modify the objectives and measures for eligible professionals (EPs) in the Medicaid Promoting Interoperability Program in order to encourage greater interoperability for Medicaid EPs. In the proposed rule, we stated

that we are interested in policy options that should be considered, including the benefits of greater alignment with the Merit-Based Incentive Payment System requirements for eligible clinicians. We also invited comments on the burdens and hurdles that such policy changes might create for EPs and States.

In connection with these proposals regarding the scoring methodology and measures, we proposed to require under § 495.40(b)(2)(vii) “dual-eligible” eligible hospitals and CAHs (those that are eligible for an incentive payment under Medicare for meaningful use of CEHRT and/or subject to the Medicare payment reduction for failing to demonstrate meaningful use, and are also eligible to earn a Medicaid incentive payment for meaningful use) to demonstrate meaningful use for the Promoting Interoperability Program to CMS, and not to their respective State Medicaid agency, beginning with the EHR reporting period in CY 2019. This includes all attestation requirements, including the objectives and measures of meaningful use, in addition to reporting clinical quality measures. In the past, we have generally adopted a common definition of meaningful use under Medicare and Medicaid (for example, 77 FR 44324 through 44326). If we adopt the proposals made in the proposed rule, there would not be a common definition of meaningful use, unless a State chooses to exercise the option described above and receives approval from CMS. In light of these changes, we believe it would be more efficient and straightforward in terms of program administration and operations if all dual-eligible eligible hospitals and CAHs demonstrate meaningful use to CMS. If a dual-eligible eligible hospital or CAH instead demonstrates meaningful use to its State Medicaid agency, it would only qualify for an incentive payment under Medicaid

(assuming it meets all eligibility and other program requirements), and it would not qualify for an incentive payment under Medicare and/or avoid the Medicare payment reduction. The proposals in the proposed rule would not change the deeming policy under the definition of meaningful EHR user under § 495.4, under which an eligible hospital or CAH that successfully demonstrates meaningful use to CMS would be deemed a meaningful EHR user for purposes of the Medicaid incentive payment.

We also proposed to amend the requirements for State reporting to CMS under the Medicaid Promoting Interoperability Program under § 495.316(g), so that States would not be required to report, for program years after 2018, provider-level attestation data for each eligible hospital that attests to the State to demonstrate meaningful use.

Comment: One commenter requested clarification on whether States have only two options: (1) continue with the existing meaningful use measures, or (2) adopt the Medicare QPP measures. The commenter supported having only two options, and stated that anything beyond those options creates confusion and burden for all stakeholders.

Response: We confirm that the commenter is correct in describing the two options proposed for States. There is no option to adopt some of the revisions to the hospital scoring system, but not others.

Comment: One commenter expressed concern that requirements around APIs are less stringent for Medicaid EPs compared to the MIPS program.

Response: While the requirements differ across different programs, we are committed to promoting API access. For example, Medicaid EPs have the opportunity to use APIs to meet Stage 3, EP Objective 6, Measure 1 (View, download or transmit). In

addition, we expressly support States' use of open APIs in their Medicaid enterprise architecture in 42 CFR 433.112.

Comment: Several commenters stated that the Medicaid Stage 3 requirements are too stringent and suggested that these requirements be aligned with those for Medicare clinicians under MIPS. In addition, one commenter suggested that CMS allow providers to attest to Meaningful Use Modified Stage 2 Objectives, using 2015 Edition CEHRT, through the end of the Promoting Interoperability Program (CY 2021).

Response: We thank the commenters for their input about the program requirements. However, we did not propose any changes to Stage 3 or for EPs in the proposed rule, but did ask for comments on ways we can align and reduce the burden for EPs who also participate in MIPS. We will take these comments into consideration for future rulemaking. As for CEHRT, the 2015 Edition does not have the capability to meet the Modified Stage 2 meaningful use objectives and measures.

After consideration of the public comments we received, we are finalizing the our proposals as proposed.

#### 8. Promoting Interoperability Program Future Direction

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20537 through 20538), we sought comments on the future direction of the Promoting Interoperability Program. In future years of the Promoting Interoperability Program, we will continue to consider changes which support a variety of HHS goals, including: reducing administrative burden; supporting alignment with the Quality Payment Program; advancing interoperability and the exchange of health information; and promoting innovative uses

of health IT. We believe a focus on interoperability and simplification will reduce health care provider burden while allowing flexibility to pursue innovative applications that improve care delivery. One strategy we are exploring is creating a set of priority health IT activities that would serve as alternatives to the traditional EHR Incentive Program measures.

We specifically sought public comments on the following questions:

- What health IT activities should CMS consider recognizing in lieu of reporting on objectives that would most effectively advance priorities for nationwide interoperability and spur innovation? What principles should CMS employ to identify health IT activities?
- Do stakeholders believe that introducing health IT activities in lieu of reporting on measures would decrease burden associated with the Promoting Interoperability Programs?
- If additional measures were added to the program, what measures would be beneficial to add to promote our goals of care coordination and interoperability?
- How can the Promoting Interoperability Program for eligible hospitals and CAHs further align with the Quality Payment Program (for example, requirements for eligible clinicians under MIPS and Advanced APMs) to reduce burden for health care providers, especially hospital-based MIPS eligible clinicians?
- What other steps can HHS take to further reduce the administrative burden associated with the Promoting Interoperability Program?

Comment: Many commenters expressed support for introducing health IT activities in lieu of reporting on measures and indicated an approach such as this would reduce provider burden associated with these reporting activities. The commenters also noted that supporting improved interoperability through this approach is an important goal.

Some commenters requested clarification on how interoperability is defined and requested that CMS work with stakeholders on identification of benchmarks and have a reasonable and predictable pathway for changing Health IT policies. Other commenters indicated a single set of standards by the Federal government is needed to ensure all health care providers are exchanging data in a uniform manner.

Some commenters disagreed with introducing health IT activities in lieu of reporting on measures as this approach could create additional burden if its required additional documentation to validate that the provider had performed the activity. Some commenters also recommended that such an approach should be left optional, as many providers may not be able to perform the activities identified. Finally, commenters expressed concerns regarding specific potential activities, for instance, one commenter expressed concern about whether participation in the Trusted Exchange Framework and Common Agreement (TEFCA) would be available by the time this approach was finalized.

Some commenters supported participation in the TEFCA and indicated it should be considered a health IT activity that could count for credit within the Health Information Exchange objective in lieu of reporting on measures for this objective.

Some commenters suggested CMS realign efforts with “Patient Centered” interoperability.

A few commenters indicated CMS should include a measure for data quality based on the USCDI which would set expectations for content, not just exchange of data.

Some commenters indicated the 2015 CEHRT needs to be updated to support integration of SNOMED, LOINC and RxNorm (and other terminology standards) into a single system.

Response: We thank the commenters for their input and we will consider their views as we develop future policy regarding the future direction of the Promoting Interoperability Program.

## 9. Clinical Quality Measurement for Eligible Hospitals and Critical Access Hospitals (CAHs) Participating in the Medicare and Medicaid Promoting Interoperability Programs

### a. Background and Current CQMs

Under sections 1814(l)(3)(A), 1886(n)(3)(A), and 1903(t)(6)(C)(i)(II) of the Act and the definition of “meaningful EHR user” under 42 CFR 495.4, eligible hospitals and CAHs must report on clinical quality measures (referred to as CQMs or eCQMs) selected by CMS using CEHRT, as part of being a meaningful EHR user under the Medicare and Medicaid Promoting Interoperability Programs.

The table below lists the 16 CQMs available for eligible hospitals and CAHs to report under the Medicare and Medicaid Promoting Interoperability Programs beginning in CY 2017 (81 FR 57255).

**CQMs for Eligible Hospitals and CAHs Beginning with CY 2017**

<b>Short Name</b>	<b>Measure Name</b>	<b>NQF Number</b>
AMI-8a	Primary PCI Received Within 90 Minutes of Hospital Arrival	0163
ED-3	Median Time from ED Arrival to ED Departure for Discharged ED Patients	0496
CAC-3	Home Management Plan of Care Document Given to Patient/Caregiver	+
ED-1	Median Time from ED Arrival to ED Departure for Admitted ED Patients	0495
ED-2	Admit Decision Time to ED Departure Time for Admitted Patients	0497
EHDI-1a	Hearing Screening Prior to Hospital Discharge	1354
PC-01	Elective Delivery (Collected in aggregate, submitted via web-based tool or electronic clinical quality measure)	0469
PC-05	Exclusive Breast Milk Feeding*	0480
STK-02	Discharged on Antithrombotic Therapy	0435
STK-03	Anticoagulation Therapy for Atrial Fibrillation/Flutter	0436
STK-05	Antithrombotic Therapy by the End of Hospital Day Two	0438
STK-06	Discharged on Statin Medication	0439
STK-08	Stroke Education	+
STK-10	Assessed for Rehabilitation	0441
VTE-1	Venous Thromboembolism Prophylaxis	0371
VTE-2	Intensive Care Unit Venous Thromboembolism Prophylaxis	0372

+ NQF endorsement has been removed.

\* Measure name has been shortened. We refer readers to annually updated measure specifications on the CMS eCQI Resource Center web page for further information at:

<https://www.healthit.gov/newsroom/ecqi-resource-center>.

**b. CQMs for Reporting Periods Beginning with CY 2020**

As we have stated previously in rulemaking (82 FR 38479), we plan to continue to align the CQM reporting requirements for the Promoting Interoperability Programs with the Hospital IQR Program. In order to move the program forward in the least

burdensome manner possible, while maintaining a set of the most meaningful quality measures and continuing to incentivize improvement in the quality of care provided to patients, we stated that we believe it is appropriate to propose to remove certain eCQMs at this time to develop an even more streamlined set of the most meaningful eCQMs for hospitals. To align with the Hospital IQR Program, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20539), we proposed to reduce the number of eCQMs in the Medicare and Medicaid Promoting Interoperability Programs eCQM measure set from which eligible hospitals and CAHs report, by proposing to remove eight eCQMs (from the 16 eCQMs currently in the measure set) beginning with the reporting period in CY 2020. The eight eCQMs we proposed to remove are:

- Primary PCI Received Within 90 Minutes of Hospital Arrival (NQF #0163) (AMI-8a);
- Home Management Plan of Care Document Given to Patient/Caregiver (CAC-3);
- Median Time from ED Arrival to ED Departure for Admitted ED Patients (NQF #0495) (ED-1);
- Hearing Screening Prior to Hospital Discharge (NQF #1354) (EHDI-1a);
- Elective Delivery (NQF #0469) (PC-01);
- Stroke Education (STK-08) (adopted at 78 FR 50807;
- Assessed for Rehabilitation (NQF #0441) (STK-10); and
- Median Time from ED Arrival to ED Departure for Discharged ED Patients (NQF 0496) (ED-3).

We note that the first seven eCQMs on this list are currently included in the Hospital IQR Program, and in section VIII.A.5.b.(9) of the preamble of the proposed rule, we proposed to remove them from the Hospital IQR Program beginning in CY 2020. For more information on the first seven eCQMs selected for removal, we refer readers to section VIII.A.5.b.(9) of the preambles of the proposed rule and this final rule.

We believe that a coordinated reduction in the overall number of eCQMs in both the Hospital IQR Program and Medicare and Medicaid EHR Promoting Interoperability will reduce certification burden on hospitals, improve the quality of reported data by enabling eligible hospitals and CAHs to focus on a smaller, more specific subset of CQMs while still allowing eligible hospitals and CAHs some flexibility to select which eCQMs to report that best reflect their patient populations and support internal quality improvement efforts. With respect to the Median Time from ED Arrival to ED Departure for Discharged ED Patients measure (NQF 0496) (ED-3), this is an outpatient measure and is not included as an eCQM in the Hospital IQR Program. We proposed to remove it so the eCQMs would align completely between the two programs in order to reduce burden and enable eligible hospitals and CAHs to easily report electronically through the Hospital IQR Program submission mechanism.

As we stated in section VIII.A.5.b.(9) of the preambles of the proposed rule and this final rule, with regard to the Hospital IQR Program proposal for the CY 2020 reporting period and subsequent years, we also considered proposing to remove these eCQMs one year earlier, beginning with the CY 2019 reporting period/FY 2021 payment determination. In establishing our eCQM policies, we must balance the needs of eligible

hospitals and CAHs with variable preferences and capabilities. Overall, across the range of capabilities and resources for eCQM reporting, stakeholders have expressed that they want more time to prepare for eCQM changes.

We recognize that some hospitals and health IT vendors may prefer earlier removal in order to forgo maintenance on those eCQMs proposed for removal. In preparation for the proposed rule, we weighed the relative burdens associated with removing these measures beginning with the CY 2019 reporting period or beginning with the CY 2020 reporting period. In the event we finalize our proposal to remove these eCQMs, we intend to align the timing of the removal for the Medicare and Medicaid Promoting Interoperability Programs with the Hospital IQR Program.

We invited public comment on our proposal, including the specific measures proposed for removal and the timing of removal from the Medicare and Medicaid Promoting Interoperability Programs.

Comment: Several commenters supported the reduction in the number of eCQMs stating that it would create a streamlined measure set. The majority of commenters addressed the reduction in the number of eCQMs in general and not specifically related to the Promoting Interoperability Program.

Response: We thank the commenters for their support and refer readers to section VIII.A.5.b. of the preamble of this final rule for more information on the eCQM proposals and for additional comments and responses. We are committed to staying in alignment with the Hospital IQR Program policies to the greatest extent feasible.

Comment: One commenter supports the use of eCQMs to measure quality of care. In addition, the commenter suggests that proposed e-measures be carefully validated by EHR vendors in advance to determine if data elements are readily available, to eliminate documentation and burden redundancies.

Response: We appreciate the commenter's position that e-measures should carefully validated prior to implementation. Our goal is to closely align the Promoting Interoperability Programs with the Hospital IQR Program, while reducing the burden on hospitals. By focusing on a smaller subset of measures, the eligible hospitals and CAHs will have some flexibility regarding eCQMs they choose to report best reflect their patient population and support internal quality improvement efforts.

We encourage eligible hospitals and CAHs to submit measures during the Annual Call for measures. This process reinforces our commitment to engaging stakeholders to process reinforces our commitment to engaging with stakeholders to further advance meaningful use of CEHRT by eligible hospitals and CAHs participating in the Promoting Interoperability Programs.

Comment: One commenter disagreed with the proposed reduction in the number of eCQMs available for reporting, indicating this would be very limiting in selection and creates additional costs, especially for small hospitals with a limited daily census.

Response: While we understand this concern, we believe that is important to align the eCQM requirements for the Promoting Interoperability Programs with those of the Hospital IQR Program. The removal of these measures is consistent with CMS' commitment to using a smaller set of more meaningful measures. CMS is focusing on

measures that provide opportunities to reduce both paperwork and reporting burden on health care providers and patient-centered outcome measures, rather than process measures. For further discussion of our policy reasons for eliminating these eCQMs for the Hospital IQR Program, which we believe also apply in the context of the Promoting Interoperability Programs, we refer readers to section VIII.A.5.b. of the preamble of this final rule.

After consideration of the public comments we received, we are adopting our proposal as proposed.

c. CQM Reporting Periods and Criteria for the Medicare and Medicaid Promoting Interoperability Programs in CY 2019

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20539 through 20540), for CY 2019, we proposed the same CQM reporting periods and criteria as established in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38479 through 38483) for the Medicare and Medicaid EHR Incentive Programs in CY 2018, which would be as follows:

For CY 2019, for eligible hospitals and CAHs that report CQMs electronically, we proposed the reporting period for the Medicare and Medicaid Promoting Interoperability Programs would be one, self-selected calendar quarter of CY 2019 data, and the submission period for the Medicare Promoting Interoperability Program would be the 2 months following the close of the calendar year, ending February 29, 2020. For eligible hospitals and CAHs that report CQMs by attestation under the Medicare Promoting Interoperability Program as a result of electronic reporting not being feasible, and for eligible hospitals and CAHs that report CQMs by attestation under their State's

Medicaid Promoting Interoperability Program, we previously established a CQM reporting period of the full CY 2019 (consisting of 4 quarterly data reporting periods) (80 FR 62893). We also established an exception to this full-year reporting period for eligible hospitals and CAHs demonstrating meaningful use for the first time under their State's Medicaid EHR Incentive Program. Under this exception, the CQM reporting period is any continuous 90-day period within CY 2019 (80 FR 62893). We proposed that the submission period for eligible hospitals and CAHs reporting CQMs by attestation under the Medicare EHR Incentive Program would be the 2 months following the close of the CY 2019 CQM reporting period, ending February 29, 2020. In regard to the Medicaid EHR Incentive Program, we provide States with the flexibility to determine the method of reporting CQMs (attestation or electronic reporting) and the submission periods for reporting CQMs, subject to prior approval by CMS.

For the CY 2019 reporting period, we proposed that the reporting criteria under the Medicare and Medicaid Promoting Interoperability Program for eligible hospitals and CAHs reporting CQMs electronically would be as follows: for eligible hospitals and CAHs participating only in the Promoting Interoperability Program, or participating in both the Promoting Interoperability Program and the Hospital IQR Program, report on at least 4 self-selected CQMs from the set of 16 available CQMs listed in the table above.

We proposed the following reporting criteria for eligible hospitals and CAHs that report CQMs by attestation under the Medicare Promoting Interoperability Program as a result of electronic reporting not being feasible, and for eligible hospitals and CAHs that report CQMs by attestation under their State's Medicaid Promoting Interoperability

Program, for the reporting period in CY 2019 – report on all 16 available CQMs listed in the table in section VIII.D.9.a. of the preamble of the proposed rule.

Comment: A few commenters supported the proposed self-selected calendar quarter of CY 2019 data for CQM reporting as it aligns to the proposed 90-day EHR reporting period for the objectives and measures of the Promoting Interoperability Program.

Response: We appreciate the support for our proposal and agree that reporting periods of similar length may help simplify data submission and reduce burden.

After consideration of the public comments we received, we are adopting our proposal as proposed.

#### d. CQM Reporting Form and Method for the Medicare Promoting Interoperability Program in CY 2019

As we stated in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49759 through 49760), for the reporting periods in 2016 and future years, we are requiring QRDA–I for CQM electronic submissions for the Medicare EHR Incentive (now Promoting Interoperability) Program. As noted in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49760), States would continue to have the option, subject to our prior approval, to allow or require QRDA–III for CQM reporting.

The form and method of electronic submission are further explained in sub-regulatory guidance and the certification process. For example, the following documents are updated annually to reflect the most recent CQM electronic specifications: the CMS Implementation Guide for QRDA; program specific performance calculation guidance;

and CQM electronic specifications and guidance documents. These documents are located on the eCQI Resource Center web page at: <https://ecqi.healthit.gov/>. For further information on CQM reporting, we refer readers to the EHR Incentive Program (now Promoting Interoperability Program) website where guides and tip sheets are located at: <http://www.cms.gov/ehrincentiveprograms>.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20540), for the reporting period in CY 2019, we proposed the following for CQM submission under the Medicare Promoting Interoperability Program:

- Eligible hospitals and CAHs participating in the Medicare Promoting Interoperability Program (single program participation)—electronically report CQMs through QualityNet Portal.
- Eligible hospital and CAH options for electronic reporting for multiple programs (that is, Promoting Interoperability Program and Hospital IQR Program participation)—electronically report through QualityNet Portal.

As noted in the 2015 EHR Incentive Programs final rule (80 FR 62894), starting in 2018, eligible hospitals and CAHs participating in the Medicare EHR Incentive Program must electronically report CQMs where feasible; and attestation to CQMs will no longer be an option except in certain circumstances where electronic reporting is not feasible. For the Medicaid Promoting Interoperability Program, States continue to be responsible for determining whether and how electronic reporting of CQMs would occur, or if they wish to allow reporting through attestation. Any changes that States make to

their CQM reporting methods must be submitted through the State Medicaid Health IT Plan (SMHP) process for CMS review and approval prior to being implemented.

For CY 2019, we proposed to continue our policy regarding the electronic submission of CQMs, which requires the use of the most recent version of the CQM electronic specification for each CQM to which the EHR is certified. For the CY 2019 electronic reporting of CQMs, this means eligible hospitals and CAHs are required to use the Spring 2017 version of the CQM electronic specifications and any applicable addenda available on the eCQI Resource Center web page at: <https://ecqi.healthit.gov/>. In addition, we proposed that eligible hospitals or CAHs must have their EHR technology certified to all 16 available CQMs listed in the table above. As discussed in section VIII.D.3. of the preamble of the proposed rule, eligible hospitals and CAHs are required to use 2015 Edition CEHRT for the Medicare and Medicaid Promoting Interoperability Programs in CY 2019. We reiterate that an EHR certified for CQMs under the 2015 Edition certification criteria does not have to be recertified each time it is updated to a more recent version of the CQMs (82 FR 38485).

We did not receive any comments on these proposals and we are adopting our proposal as proposed.

e. Request for Comment

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20540 through 20541), we requested comments on a number of issues regarding eCQMs. Specifically, we invited comment on the following:

- What aspects of the use of eCQMs are most burdensome to hospitals and health IT vendors?
- What program and policy changes, such as improved regulatory alignment, would have the greatest impact on addressing eCQM burden?
- What are the most significant barriers to the availability and use of new eCQMs today?
- What specifically would stakeholders like to see us do to reduce burden and maximize the benefits of eCQMs?
- How could we encourage hospitals and health IT vendors to engage in improvements to existing eCQMs?
- How could we encourage hospitals and health IT vendors to engage in testing new eCQMs?
- Would hospitals and health IT vendors be interested in or willing to participate in pilots or models of alternative approaches to quality measurement that would explore less burdensome ways of approaching quality measurement, such as sharing data with third parties that use machine learning and natural language processing to classify quality of care or other approaches?
- What ways could we incentivize or reward innovative uses of health IT that could reduce burden for hospitals?
- What additional resources or tools would hospitals and health IT vendors like to have publicly available to support testing, implementation, and reporting of eCQMs?

We received numerous comments in response to our request for comment.

Comment: Several commenters supported the goals of using EHRs to reduce the burden of quality reporting and use of the data to support their quality improvement initiatives. Several commenters supported the following improvements in quality measurement: uniform calculation of eCQMs across various CEHRT systems and practices; addressing misalignment between the eCQM reporting requirements and availability of eCQMs by vendors; improved methods of reporting to support the needs of the program participants; development of strategies to apply the Meaningful Measures framework to eCQMs; development of metrics that inform readiness of eCQM data for public reporting; and increased opportunities for eligible hospitals and CAHs to participate in eCQM testing using processes, methods and/or innovated use of health IT. A few commenters suggested rewarding hospitals who already implemented innovative quality improvement programs and processes using health IT. A few commenters indicated that future eCQMs should be based on data elements that are already captured within CEHRT.

A few commenters indicated that burdens related to use of eCQMs included exclusions and data availability and many eCQMs are not developed based on data available or created during routine care. A few commenters indicated it is burdensome to test eCQMs due to time, effort and resource requirements. A few commenters requested simplification of the measure development process which would include strict selection criteria and endorsement processes as the current development process was noted to create significant barrier related to availability and use.

A few commenters suggested CMS work with stakeholders to establish research and pilot programs to reduce quality measurement burden and leverage data captured by all members of the care team, other electronic means or by the patients themselves.

Response: We thank the commenters and we will consider their views as we develop future policy regarding eCQMs.

#### 10. Participation in the Medicare Promoting Interoperability Program for Subsection (d) Puerto Rico Hospitals

##### a. Background

In the Stage 1 final rule (77 FR 44448), we noted that subsection (d) Puerto Rico hospitals as defined in section 1886(d)(9)(A) of the Act were not “eligible hospitals” as defined in section 1886(n)(6)(B) of the Act, and therefore were not eligible for the incentive payments for the meaningful use of CEHRT under section 1886(n) of the Act. Section 602(a) of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113) subsequently amended section 1886(n)(6)(B) of the Act to include subsection (d) Puerto Rico hospitals in the definition of “eligible hospital,” which made subsection (d) Puerto Rico hospitals eligible for the incentive payments under section 1886(n) of the Act for hospitals that are meaningful EHR users and subject to the payment reductions under section 1886(b)(3)(B)(ix) of the Act for hospitals that are not meaningful EHR users. In order to take into account delays in implementation, section 602(d) of the Consolidated Appropriations Act, 2016 adjusted the existing timelines for the incentive payments by five years and payment reductions by seven years for subsection (d) Puerto Rico hospitals, as further discussed in the sections below.

As authorized under section 602(c) of the Consolidated Appropriations Act, 2016, we have previously elected to implement the amendments made by section 602 as applied to subsection (d) Puerto Rico hospitals through program instruction. In doing so we have sought to align the policies for subsection (d) Puerto Rico hospitals with our existing policies for eligible hospitals under the Medicare Promoting Interoperability Program to the greatest extent possible, while taking into account the unique circumstances applicable to hospitals on Puerto Rico. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20541 through 20542), we proposed to codify the program instructions we have issued to subsection (d) Puerto Rico hospitals and to amend our regulations under Parts 412 and 495 such that the provisions that apply to eligible hospitals would include subsection (d) Puerto Rico hospitals unless otherwise indicated.

b. Definitions

(1) Eligible Hospital: Subsection (d) Puerto Rico Hospitals

We proposed to define a “Puerto Rico eligible hospital” under § 495.100 as a subsection (d) Puerto Rico hospital as defined in section 1886(d)(9)(A) of the Act.

We proposed to amend the definition of “eligible hospital” under § 495.100 to include Puerto Rico eligible hospitals unless otherwise indicated.

We proposed to amend the general provisions under § 412.200 as related to prospective payment rates for inpatient operating costs for subsection (d) Puerto Rico hospitals.

We did not receive any comments on these proposals and are finalizing our proposals as proposed.

(2) EHR Reporting Period: Subsection (d) Puerto Rico Hospitals

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that for subsection (d) Puerto Rico hospitals, FY 2016 is the first payment year under section 1886(n)(2)(G)(i) of the Act for which an incentive payment could be made to a hospital that is a meaningful EHR user. The definition of “EHR reporting period” under § 495.4 specifies for eligible hospitals for the FY 2016 payment year an EHR reporting period of any continuous 90-day period in CY 2016, which is consistent with the program instructions we issued to subsection (d) Puerto Rico hospitals, so we do not believe any amendment is necessary. We proposed to amend the definition of “EHR reporting period” under § 495.4 to specify for Puerto Rico eligible hospitals for the FY 2017 payment year an EHR reporting period of a minimum of any continuous 14-day period in CY 2017, which is consistent with the program instructions we issued to subsection (d) Puerto Rico hospitals. We allowed for a 14-day EHR reporting period in CY 2017 to acknowledge and account for the devastation to Puerto Rico caused by Hurricane Maria. We have not issued program instructions to subsection (d) Puerto Rico hospitals concerning the EHR reporting periods for the payment years after FY 2017. For the FY 2018, 2019, and 2020 payment years, we proposed an EHR reporting period of a minimum of any continuous 90-day period in CYs 2018, 2019, and 2020 respectively for Puerto Rico eligible hospitals, and we proposed corresponding amendments to the definition of “EHR reporting period” under § 495.4.

Comment: Several commenters supported the proposed codification of the policies for subsection (d) Puerto Rico hospitals for the Promoting Interoperability

Program. One commenter expressed gratitude for the reduction of the EHR reporting period from 90 days to 14 days in CY 2017 after Hurricane María as the commenter indicated it helped hospitals in Puerto Rico demonstrate meaningful use and find relief within the difficult situation.

Response: We appreciate the commenters' support.

After consideration of the public comment we received, we are finalizing our proposals as proposed.

### (3) EHR Reporting Period for a Payment Adjustment Year for Eligible Hospitals:

#### Subsection (d) Puerto Rico Hospitals

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that the payment reductions under section 1886(b)(3)(B)(ix) of the Act would apply beginning with FY 2022 for subsection (d) Puerto Rico hospitals that are not meaningful EHR users for the applicable EHR reporting period for the payment adjustment year. Because Puerto Rico eligible hospitals would be considered eligible hospitals, the EHR reporting periods for payment adjustment years and related policies, including deadlines and requests for significant hardship exceptions, that we establish for eligible hospitals would also apply to Puerto Rico eligible hospitals beginning with the FY 2022 payment adjustment year.

We did not receive any comments on this topic.

### (4) Payment Year for Subsection (d) Puerto Rico Hospitals

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that for subsection (d) Puerto Rico hospitals, FY 2016 is the first payment year under section

1886(n)(2)(G)(i) of the Act for which an incentive payment could be made to a hospital that is a meaningful EHR user. We proposed to amend the definition of “payment year” under § 495.4 to specify for Puerto Rico eligible hospitals, payment year means a Federal FY beginning with 2016.

We did not receive any comments on this proposal and are finalizing our proposal as proposed.

(5) Payment Adjustment Year for Subsection (d) Puerto Rico Hospitals

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that the payment reductions under section 1886(b)(3)(B)(ix) of the Act will apply beginning with FY 2022 for subsection (d) Puerto Rico hospitals that are not meaningful EHR users for the applicable EHR reporting period for the payment adjustment year. We proposed to amend the definition of “payment adjustment year” under § 495.4 to specify for Puerto Rico eligible hospitals, payment adjustment year means a Federal fiscal year beginning with 2022.

We did not receive any comments on this proposal and are finalizing our proposal as proposed.

c. Duration and Timing of Incentive Payments for Subsection (d) Puerto Rico Hospitals -- Transition Periods and Transition Factors

Section 602(d) of the Consolidated Appropriations Act, 2016 provides for a phase down under section 1886(n)(2)(E)(ii) of the Act for subsection (d) Puerto Rico hospitals whose first payment year is after 2018. We proposed to amend § 495.104(b) to specify

the following years for which Puerto Rico eligible hospitals may receive incentive payments under section 1886(n) of the Act:

- Puerto Rico eligible hospitals whose first payment year is FY 2016 may receive such payments for FYs 2016 through 2019.
- Puerto Rico eligible hospitals whose first payment year is FY 2017 may receive such payments for FYs 2017 through 2020.
- Puerto Rico eligible hospitals whose first payment year is FY 2018 may receive such payments for FYs 2018 through 2021.
- Puerto Rico eligible hospitals whose first payment year is FY 2019 may receive such payments for FY 2019 through 2021.
- Puerto Rico eligible hospitals whose first payment year is FY 2020 may receive such payments for FY 2020 through 2021.

We proposed to amend § 495.104(c)(5) to specify the following transition factors under section 1886(n)(2)(E)(i) of the Act for Puerto Rico eligible hospitals:

**Proposed Transition Factors for Subsection (d) Puerto Rico Hospitals**

<b>First Payment Year (FY)</b>					
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>2016</b>	<b>1.00</b>				
<b>2017</b>	<b>0.75</b>	<b>1.00</b>			
<b>2018</b>	<b>0.50</b>	<b>0.75</b>	<b>1.00</b>		
<b>2019</b>	<b>0.25</b>	<b>0.50</b>	<b>0.75</b>	<b>0.75</b>	
<b>2020</b>		<b>0.25</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>
<b>2021</b>			<b>0.25</b>	<b>0.25</b>	<b>0.25</b>

We did not receive any comments on these proposals and are finalizing our proposals as proposed.

d. Market Basket Adjustment for Subsection (d) Puerto Rico Hospitals

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that the payment reductions under section 1886(b)(3)(B)(ix) of the Act would apply beginning with FY 2022 for subsection (d) Puerto Rico hospitals. We proposed for a subsection (d) Puerto Rico hospital that is not a meaningful EHR user for the EHR reporting period for the FY, three-quarters of the applicable percentage increase otherwise applicable for such FY shall be reduced by 33 1/3 percent for FY 2022, 66 2/3 percent for FY 2023, and 100 percent for FY 2024 and each subsequent FY. We proposed to amend § 412.64(d)(3) to reflect these proposed reductions.

We did not receive any comments on these proposals and are finalizing our proposals as proposed.

11. Modifications to the Medicare Advantage Promoting Interoperability Program

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20542 through 20543), we proposed several modifications to the Medicare Advantage Promoting Interoperability Program.

a. Participation in the Medicare Advantage Promoting Interoperability Program for Subsection (d) Puerto Rico Hospitals

Section 1853(m) of the Act provides for incentive payments to qualifying Medicare Advantage (MA) organizations for certain affiliated eligible hospitals (as defined in section 1886(n)(6)(B)) that meaningfully use certified EHR technology, and for application of downward payment adjustments to qualifying MA organizations for their affiliated hospitals that are not meaningful users of certified EHR technology,

beginning in FY 2015. As noted in section VIII.D.8. of the preamble of the proposed rule, section 602(a) of the Consolidated Appropriations Act, 2016 amended section 1886(n)(6)(B) of the Act to include subsection (d) Puerto Rico hospitals in the definition of “eligible hospital.” We note that the definition of “qualifying MA-affiliated hospital” in § 495.200 means an eligible hospital under section 1866(n)(6) that meets certain other criteria. Therefore, the amendment to section 1866(n)(6) by the Consolidated Appropriations Act to include subsection (d) Puerto Rico hospitals renders such hospitals potentially eligible as qualifying MA-affiliated hospitals for purposes of the Medicare Advantage Promoting Interoperability incentives and payment adjustments. We proposed certain changes to our regulations under 42 CFR Part 495 so that the incentive payment and payment adjustment provisions that apply to MA-affiliated eligible hospitals are applicable to MA-affiliated eligible hospitals in Puerto Rico.

b. Definitions

(1) Payment Year for MA-Affiliated Eligible Hospitals in Puerto Rico

Section 602(d) of the Consolidated Appropriations Act, 2016 provides that for subsection (d) Puerto Rico hospitals, FY 2016 is the first payment year for which an EHR incentive payment could be made to an eligible hospital that is a meaningful EHR user. We proposed, under section 1871 of the Act and to implement that amendment to the EHR provisions, to amend the definition of “payment year” under § 495.200 to specify that, with respect to MA-affiliated eligible hospitals in Puerto Rico, payment year means a Federal FY beginning with 2016 and ending with FY 2021.

We did not receive any comments on this proposal so we are adopting the amendments to the definition of “payment year” in § 495.200 as proposed to be consistent with the statute.

(2) MA Payment Adjustment Year for MA-Affiliated Eligible Hospitals in Puerto Rico

Section 602(d) of the Consolidated Appropriations Act, 2016 provides for payment reductions to subsection (d) Puerto Rico hospitals that are not meaningful EHR users for the applicable EHR reporting period for the payment adjustment year, beginning with FY 2022. We proposed to amend the definition of “MA payment adjustment year” under § 495.200 to specify that, for qualifying MA organizations that first receive an MA EHR incentive payment for at least 1 payment year for an MA-affiliated eligible hospital in Puerto Rico, payment adjustment year means a calendar year starting with 2022.

We solicited feedback on whether we should amend the definition of “MA payment adjustment year” to specify that the duration of the reporting period for MA-affiliated eligible hospitals for purposes of determining whether a qualifying MA organization is subject to a payment adjustment should be other than the full Federal fiscal year ending in the MA payment adjustment year. We also requested comments on an alternative approach under which we would use the same reporting period that is used for the Medicare Promoting Interoperability Program.

We did not receive any comments on this proposal so we are finalizing the amendment to the definition of “MA payment adjustment year” under § 495.200 as proposed.

c. Payment Adjustments Effective for 2015 and Subsequent MA Payment Years with Respect to MA-Affiliated Eligible Hospitals

Under § 495.211, beginning for MA payment adjustment year 2015, payment adjustments set are made to prospective payments (issued under section 1853(a)(1)(A) of the Act) of qualifying MA organizations that previously received incentive payments under the MA EHR Incentive (now Promoting Interoperability) Program, if all or a portion of the MA-affiliated eligible hospitals that would meet the definition of qualifying MA-affiliated eligible hospitals (but for their demonstration of meaningful use) are not meaningful EHR users. Section 495.211(e) sets forth the formula for calculating payment adjustments for 2015 and subsequent years with respect to MA-affiliated eligible hospitals. We proposed to amend paragraph (e) by adding a new subparagraph (4), which specifies that, prior to payment adjustment year 2022, subsection (d) Puerto Rico hospitals are neither qualifying nor potentially qualifying MA-affiliated eligible hospitals for purposes of applying the payment adjustments under § 495.211.

We solicited comment on whether further regulatory amendments are necessary or appropriate so that the EHR incentive payment and payment adjustment provisions that apply to MA-affiliated eligible hospitals are applicable to MA-affiliated eligible hospitals in Puerto Rico in a manner that is consistent with the Consolidated Appropriations Act, 2016.

Comment: One commenter requested that the Medicare Advantage benchmarks be updated so that the 2019 Medicare Advantage benchmark payments can reflect any payment updates in fee for service resulting from 2019 FFS payment rules.

Response: The request for CMS to immediately conform MA benchmarks to reflect payment updates in FFS Medicare is outside the scope of the proposed rule. We address updates to MA benchmarks through the annual Advance Notice and Rate Announcement process.

After consideration of the public comment we received, we are finalizing the amendment to § 495.211(e) (that is, adding paragraph (e)(4)) as proposed.

#### 12. Modifications to the Medicaid Promoting Interoperability Program

In section VIII.E.12. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20543 through 20544), we proposed modifications to the Medicaid Promoting Interoperability Program. The policies proposed in that section would apply only in the Medicaid EHR Incentive (now Promoting Interoperability) Program.

Comment: One commenter stated that changing the program name from the Medicaid EHR Incentive Program to the Medicaid Promoting Interoperability Program would create confusion and lead to lower participation rates.

Response: The program name change was announced in the proposed rule. The name change was intended to highlight the efforts within CMS to promote interoperability between patients, health care providers and health insurers. We are working to educate stakeholders that the name change does not signal an end to Medicaid incentive payments for meaningful use prior to the deadlines finalized in this final rule and to alleviate any potential confusion regarding the name change.

a. Requirements Regarding Prior Approval of Requests for Proposals (RFPs) and Contracts in Support of the Medicaid Promoting Interoperability Program

Section 1903(a)(3)(F)(ii) of the Act establishes an enhanced Federal matching rate of 90 percent for State expenditures related to the administration of Medicaid Promoting Interoperability Program payments. On July 28, 2010, in the Stage 1 final rule (75 FR 44313, 44507), we established prior approval requirements for State funding, planning documents, proposed budgets, project schedules, and certain implementation activities that a State may wish to pursue in support of the Medicaid Promoting Interoperability Program, as a condition of receipt of the 90 percent FFP available to States under section 1903(a)(3)(F)(ii) of the Act. To minimize the burden on States, we designed the prior approval conditions and prior approval process to mirror what was at the time used in support of acquiring automated data processing (ADP) equipment and services in conjunction with development and operation of States' Medicaid Management Information Systems (MMIS), which are the States' automated mechanized claims processing and information retrieval systems approved by CMS. Specifically, at § 495.324(b)(2) we established that, as a condition of receiving 90 percent FFP for administration of their Medicaid Promoting Interoperability Programs, States must receive prior approval for requests for proposals and contracts used to complete activities under 42 CFR Part 495, Subpart D, unless specifically exempted by HHS, before release of the request for proposal or execution of the contract. This was consistent with the requirement then in place for MMIS at 45 CFR 95.611(a)(2). At § 495.324(b)(3) we established that unless specifically exempted by HHS, States must receive prior approval

for contract amendments involving contract cost increases exceeding \$100,000 or contract time extensions of more than 60 days, prior to execution of the contract amendment. This was consistent with the requirement then in place at 45 CFR 95.611(b)(2)(iv).

Subsequently, in the final rule titled “State Systems Advance Planning Document (APD) Process” (75 FR 66319, October 28, 2010), HHS amended 45 CFR 95.611(b)(2)(iii) to establish a \$500,000 threshold for prior HHS approval of acquisition solicitation documents and contracts for ADP equipment or services for which States would seek enhanced Federal matching funds (75 FR 66331). In the same rule, HHS also established at 45 CFR 95.611(b)(2)(iv) a \$500,000 prior approval threshold for contract amendments for which States would seek enhanced Federal match (75 FR 66324). In the final rule titled “Medicaid Program; Mechanized Claims Processing and Information Retrieval Systems (90/10)” (80 FR 75817, 75836 through 75837, December 4, 2015), 45 CFR 95.611(a)(2) was amended to establish a \$500,000 threshold for prior approval of acquisitions related to ADP equipment and services matched at the enhanced rate for MMIS authorized under 42 CFR part 433, subpart C. There was previously no threshold dollar amount for prior approvals related to such acquisitions in 45 CFR 95.611(a)(2).

In the proposed rule, we proposed to amend 42 CFR 495.324(b)(2) and 495.324(b)(3) to align with current prior approval policy for MMIS and ADP systems at 45 CFR 95.611(a)(2)(ii), and (b)(2)(iii) and (iv), and to minimize burden on States. Specifically, we proposed that the prior approval dollar threshold in § 495.324(b)(3)

would be increased to \$500,000, and that a prior approval threshold of \$500,000 would be added to § 495.324(b)(2). We also proposed minor amendments to the language of 495.324(b)(2) and (3) to better align it with the language of 45 CFR 95.611(b)(2)(iii) and (iv). In addition, in light of these proposed changes, we proposed a conforming amendment to amend the threshold in § 495.324(d) for prior approval of justifications for sole source acquisitions to be the same \$500,000 threshold. That threshold is currently aligned with the \$100,000 threshold in current § 495.324(b)(3). We explained that we believe that amending § 495.324(d) to preserve alignment with § 495.324(b)(3) would reduce burden on States and maintain the consistency of our prior approval requirements. This proposal would not affect the other requirements that States must comply with when making acquisitions in support of the Medicaid Promoting Interoperability Program under the Federal provisions contained in 42 CFR Part 495, Subpart D, and specifically 42 CFR 495.348, regardless of conditions for prior approval.

We explained in the proposed rule that we believe that this proposal would reduce burden on States by raising the prior approval thresholds and generally aligning them with the thresholds for prior approval of MMIS and ADP acquisitions costs.

We did not receive any comments on this proposal and are finalizing the proposal as proposed.

#### b. Funding Availability to States to Conclude the Medicaid Promoting Interoperability Program

Under section 1903(a)(3)(F) and (t) of the Act, State Medicaid programs may receive FFP in expenditures for incentive payments to certain Medicaid providers to

adopt, implement, upgrade, and meaningfully use CEHRT. In addition, FFP is available to States for reasonable administrative expenses related to administration of those incentive payments as long as the State meets certain conditions. Specifically, section 1903(a)(3)(F)(i) of the Act establishes 100 percent FFP to States for incentive payments to eligible Medicaid providers (described in section 1903(t)(1) and (2) of the Act) to adopt, implement, upgrade, and meaningfully use CEHRT. Section 1903(a)(3)(F)(ii) of the Act establishes 90 percent FFP to States for administrative expenses related to administration of the incentive payments.

In § 495.320 and § 495.322, we provide the general rule that States may receive:

- (1) 100 percent FFP in State expenditures for EHR incentive payments; and
- (2) 90 percent FFP in State expenditures for administrative activities in support of implementing incentive payments to Medicaid eligible providers. Section 495.316 establishes State monitoring and reporting requirements regarding activities required to receive an incentive payment. Subject to § 495.332, the State is responsible for tracking and verifying the activities necessary for a Medicaid EP or eligible hospital to receive an incentive payment for each payment year, as described in § 495.314.

To date, we have not established a date beyond which 90 percent FFP is no longer available to States for their expenditures related to administering the Medicaid Promoting Interoperability Program. In the Stage 1 final rule (75 FR 44319), we established that, in accordance with sections 1903(t)(4)(A)(iii) and (5)(D) of the Act, in no case may any Medicaid EP or eligible hospital receive an incentive payment after 2021 (42 CFR 495.310(a)(2)(v) and 495.310(f)).

Because December 31, 2021 is the last date that States could make Medicaid Promoting Interoperability incentive payments to Medicaid EPs and eligible hospitals (other than pursuant to a successful appeal related to 2021 or a prior year), we believe it is reasonable for States to conclude most administrative activities related to the Medicaid Promoting Interoperability Program, including submitting final required reports to CMS, by September 30, 2022. Therefore, we proposed to amend § 495.322 to provide that the 90 percent FFP for Medicaid Promoting Interoperability Program administration would no longer be available for most State expenditures incurred after September 30, 2022.

We proposed a later sunset date for the availability of 90 percent enhanced match for State administrative costs related to Medicaid Promoting Interoperability Program audit and appeals activities, as well as costs related to administering incentive payment disbursements and recoupments that might result from those activities. States have a responsibility to conduct audits of the payments made to Medicaid providers participating in the Medicaid Promoting Interoperability Program, in accordance with § 495.368, in order to combat fraud and abuse, and States also must provide a process for EHR incentive payment appeals in accordance with § 495.370. We expect that these activities will require administration for some time after, but at most a year, beyond September 30, 2022. Because provider incentive payments could be disbursed up until December 31, 2021, we anticipate that States would need additional time to review provider risk factors, select samples, and conduct audits. Once post-payment audits are completed, States would also need time to work with any providers who choose to appeal their audit findings. Collectively, the post-payment audit process and/or appeals process

could take several months, and in some cases might take more than one year. Therefore, we proposed that the 90 percent FFP would continue to be available for State administrative expenditures related to Medicaid Promoting Interoperability Program audit and appeals activities until September 30, 2023. States would not be able to claim any Medicaid Promoting Interoperability Program administrative match for expenditures incurred after September 30, 2023.

States should be aware that under this proposal, they would need to incur the expenditures for which they would claim the 90 percent FFP for Medicaid Promoting Interoperability Program administrative activities no later than the sunset dates of September 30, 2022 or September 30, 2023, as applicable. This means that for States to claim the 90 percent FFP for goods and services related to Medicaid Promoting Interoperability Program administrative activities, States would have to ensure that the goods and services are provided no later than close of business September 30, 2022 or close of business September 30, 2023, as applicable. Thus, for example, if an amount that is related to administration of a Medicaid Promoting Interoperability Program audit or appeal has been obligated by September 30, 2023, but the good or service has not yet been furnished by that date, then the expenditure could not be claimed at the enhanced 90 percent FFP.

We invited public comments on this proposal, especially on whether the timelines proposed provide States with a reasonable amount of time to wind down their Medicaid Promoting Interoperability Programs.

Comment: Many commenters expressed concerns about the December 31, 2021 deadline for disbursing all incentive payments for the Medicaid Promoting Interoperability Program, particularly that it would be burdensome for States to issue incentive payments by December 31, 2021 for Program Year 2021, and that EPs and eligible hospitals would not have time for a full reporting period before the attestation deadline. Several commenters suggested extending the December 31, 2021 deadline.

Response: Under sections 1903(t)(4)(A)(iii) and (5)(D) of the Act, all Medicaid Promoting Interoperability Program incentive payments must be made by December 31, 2021. Because this is a statutory deadline, we do not have the authority to change it. We note that in the “Medicare Program: Revisions to Payment Policies under the Physician Fee Schedule and Other Revisions to Part B for CY 2019, Medicare Shared Savings Program Requirements; Quality Payment Program, and Medicaid Promoting Interoperability Program” proposed rule, we are seeking comment on proposed flexibilities to the EHR reporting period and eCQM reporting period for the Medicaid Promoting Interoperability Program in CY 2021 (83 FR 35872 through 35873). This proposed rule is available at:

<https://www.federalregister.gov/documents/2018/07/27/2018-14985/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-and-other-revisions>.

Comment: Several commenters suggested that 90 percent administrative FFP for HIE activities be extended beyond the proposed deadline.

Response: Consistent with section 1903(a)(3)(F) and (t) of the Act, enhanced administrative FFP under the Medicaid Promoting Interoperability Program for HIE must

be directly correlated to the Medicaid EHR Incentive Program. That is, enhanced administrative FFP for HIE must be directly tied to promoting EPs' and eligible hospitals' adoption and meaningful use of CEHRT. Once the deadline for making incentive payments (December 31, 2021) has passed, we are concerned that there would be no basis for continuing enhanced administrative FFP for HIE consistent with section 1903(a)(3)(F)(ii) of the Act. We intend to issue information regarding incurring expenditures that could be matched at enhanced administrative FFP under section 1903(a)(3)(F)(ii) of the Act for HIE under the Medicaid Promoting Interoperability Program. However, we are committed to promoting interoperability, and we are continuing to look for ways for Medicaid to support HIE initiatives.

For additional information on FFP for State administrative expenses related to pursuing initiatives to encourage the adoption of CEHRT to promote health care quality and the exchange of health care information, we refer readers to State Medicaid Director letters #10-016, 11-004, and #16-003. We understand the ongoing importance of HIE to State Medicaid programs, but again, we are concerned that we do not have the authority to extend the availability of enhanced administrative FFP under section 1903(a)(3)(F)(ii) of the Act for HIE beyond the December 31, 2021 deadline for making incentive payments.

Comment: One commenter suggested that CMS allow continued 90 percent FFP for States to complete administrative work, such as annual and quarterly reporting to CMS, beyond December 31, 2021.

Response: We note that we proposed and are finalizing that FFP is available at 90 percent for administrative activities in support of implementing incentive payments to Medicaid eligible providers only for expenditures incurred on or before September 30, 2022, except for expenditures related to audit and appeal activities, which must be incurred before September 30, 2023 to qualify for FFP at 90 percent. There are two sets of reports that are required from States for the Medicaid Promoting Interoperability Program, the annual report at § 495.316(c) and quarterly reports at § 495.352. As we approach 2021 and 2022, we will take the deadlines we are finalizing in this final rule into consideration as we set reporting requirements and deadlines for 2021 and 2022, so that States will be able to conclude administrative activities by the September 30, 2022 in a manner that will allow them to claim 90 percent FFP.

Comment: Several commenters supported the deadline of September 30, 2023 for incurring expenditures related to audit and appeals activities that can be matched at 90 percent FFP, including directly-related technical assistance and administrative activities. A few commenters suggested extending that September 30, 2023 deadline by another year.

Response: We thank the commenters for their input. We acknowledge that some States are several years behind their auditing targets. However, we believe that timely auditing is important and encourage those States to accelerate their auditing timelines. We note that hiring additional auditing staff or contractors would be eligible for enhanced FFP. In addition, we note that any expenditures related to audits and appeals, will be eligible for enhanced administrative FFP until September 30, 2023.

After consideration of the public comments we received, we are finalizing the proposed policies as proposed. We are amending § 495.322 to provide that the 90 percent FFP for Medicaid Promoting Interoperability Program administration would no longer be available for most State expenditures incurred after September 30, 2022.

The availability of 90 percent match for State administrative costs related to Medicaid Promoting Interoperability Program audit and appeals activities, as well as costs related to administering incentive payment disbursements and recoupments that might result from those activities, will continue until September 30, 2023. States would not be able to claim any Medicaid Promoting Interoperability Program administrative match for expenditures incurred after September 30, 2023.

States should be aware that under this final rule, they will need to incur the expenditures for which they would claim the 90 percent FFP for Medicaid Promoting Interoperability Program administrative activities no later than the sunset dates of September 30, 2022 or September 30, 2023, as applicable. This means that for States to claim the 90 percent FFP for goods and services related to Medicaid Promoting Interoperability Program administrative activities, States will have to ensure that the goods and services are provided no later than close of business September 30, 2022 or close of business September 30, 2023, as applicable.

## **IX. Revisions of the Supporting Documentation Required for Submission of an Acceptable Medicare Cost Report**

### A. Background

Sections 1815(a) and 1833(e) of the Act provide that no Medicare payments will be made to a provider unless it has furnished the information, as may be requested by the Secretary, to determine the amount of payments due the provider under the Medicare program. In general, providers submit this information through annual cost reports<sup>410</sup> that cover a 12-month period of time. Under the regulations at 42 CFR 413.20(b) and 413.24(f), providers are required to submit cost reports annually, with the reporting period based on the provider's accounting year. For cost years beginning on or after October 1, 1989, section 1886(f)(1) of the Act and § 413.24(f)(4) of the regulations require hospitals to submit cost reports in a standardized electronic format, and the same requirement was later imposed for other types of providers.

All providers participating in the Medicare program are required under § 413.20(a) to maintain sufficient financial records and statistical data for proper determination of costs payable under the program. Moreover, providers must use standardized definitions and follow accounting, statistical, and reporting practices that are

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<sup>410</sup> There are currently nine Medicare cost reports: the Hospital and Health Care Complex Cost Report, Form CMS-2552, OMB No. 0938-0050; the Skilled Nursing Facility and Skilled Nursing Facility Health Care Complex Cost Report, Form CMS-2540, OMB No. 0938-0463; the Home Health Agency Cost Report, Form CMS-1728, OMB No. 0938-0022; the Outpatient Rehabilitation Provider Cost Report, Form CMS-2088, OMB No. 0938-0037; the Independent Rural Health Clinic and Freestanding Federally Qualified Health Center Cost Report (prior to October 1, 2014), Form CMS-222, OMB No. 0938-0107; the Federally Qualified Health Center Cost Report (beginning on or after October 1, 2014), Form CMS-224, OMB No. 0938-1298; the Organ Procurement Organizations and Histocompatibility Laboratory, Form CMS-216, OMB No. 0938-0102; the Independent Renal Dialysis Facility Cost Report, Form CMS-265, OMB No. 0938-0236; and the Hospice Cost and Data Report, Form CMS-1984, OMB No. 0938-0758.

widely accepted in the hospital and related fields. Upon receipt of a provider's cost report, the Medicare Administrative Contractor (herein referred to as "contractor") reviews the cost report to determine its acceptability in accordance with § 413.24(f)(5). Each cost report submission by a provider to its contractor, including an amended cost report, is considered to be a separate cost report submission under § 413.24(f)(5). Each cost report submission requires the supporting documentation specified in § 413.24(f)(5)(i). A cost report submitted without the required supporting documentation is rejected under § 413.24(f)(5)(i). Under § 413.24(f)(5)(iii), when the cost report is rejected, it is deemed an unacceptable submission and treated as if it had never been filed.

Several provisions in the regulations requiring supporting documentation for the Medicare cost report to be acceptable need to be updated to reflect current practices, to improve the accuracy of these reports, and to facilitate more efficient contractor review of cost reports. The regulations at § 413.24(f)(5)(i) provides that a provider's cost report is rejected if the provider does not complete and submit the Provider Cost Reimbursement Questionnaire (a questionnaire independent of the cost report, OMB No. 0938-0301, also known as Form CMS-339). The Form CMS-339 requires the provider to submit supporting documents, as applicable, for items such as Medicare bad debt, approved educational activities, and cost allocation from a home office or chain organization.

Beginning in 2011, as cost report forms were updated for various provider types, the Form CMS-339 was incorporated as a worksheet in the Medicare cost report (the worksheet title and placement within the cost report vary by provider type), and is no longer submitted as a separate supporting document. The Form CMS-339 has been

incorporated into all Medicare cost reports except for the Organ Procurement Organization (OPO) and Histocompatibility Laboratory cost report, Form CMS-216. In section IX.B. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20544 through 20548), we proposed to incorporate the Form CMS-339 into the OPO and Histocompatibility cost report, Form CMS-216.

The cost report worksheet that incorporated the Form CMS-339 continues to require the provider to submit supporting documents for Medicare bad debt, approved educational activities, and certain cost allocation information from a home office or chain organization, as applicable. However, our regulations at § 413.24(f)(5)(i) do not reflect that the Provider Cost Reimbursement Questionnaire, Form CMS-339, has been incorporated into the Medicare cost report as a worksheet because the regulations require the Form CMS-339 to be submitted as a supporting document to the cost report.

Section 413.24(f)(5)(i) also provides that a cost report is rejected for a teaching hospital if a copy of the Intern and Resident Information System (IRIS) diskette is not included as supporting documentation. However, diskettes are no longer used by providers to furnish these data to contractors.

Section 413.20 of the regulations requires providers to maintain sufficient financial records and statistical data for the proper determination of costs payable under the program as well as an adequate ongoing system for furnishing records needed to provide accurate cost data and other information capable of verification by qualified auditors. In accordance with § 413.20(d), the provider must furnish such information to the contractor as may be necessary to assure proper payment. Information from the

provider relating to Medicaid days used in the calculation of DSH payments, charity care charges, uninsured discounts, and home office cost allocations are necessary to assure proper payment. While our regulations require that these supporting documents be maintained by the provider and furnished to the contractor to assure proper payment, § 413.24(f)(5) does not require submission of supporting documentation for Medicaid days used in the calculation of DSH payments, charity care charges, uninsured discounts, or home office cost allocations reported on a provider's cost report for the provider to have an acceptable cost report submission. These supporting documents are often subsequently requested by the contractor, and must be submitted by the provider in order to assure proper payment, which can delay payments and prolong audits.

Our specific proposals for revising our regulations that were included in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20544 through 20548) are discussed below, along with the public comments we received and our responses and the policies that we are finalizing in this final rule.

## B. Revisions to Regulations

### 1. Provider Cost Reimbursement Questionnaire

Section 413.24(f)(5)(i) of the regulations provides that a provider's Medicare cost report is rejected for lack of supporting documentation if it does not include the Provider Cost Reimbursement Questionnaire (also known as Form CMS-339). As discussed in section IX.A. of the preamble of the proposed rule and this final rule, beginning in 2011, as cost report forms were updated, the Provider Cost Reimbursement Questionnaire, Form CMS-339, was incorporated into all Medicare cost reports as a worksheet, except

the OPO and Histocompatibility Laboratory cost report, Form CMS-216. In the FY 2019 IPPS/LTCH PPS proposed rule, we proposed to incorporate the Provider Cost Reimbursement Questionnaire, Form CMS-339, into the OPO and Histocompatibility Laboratory cost report, Form CMS-216. The incorporation of the Form CMS-339 into the Form CMS-216 will complete our incorporation of the Form CMS-339 into all Medicare cost reports.

In addition, in the proposed rule, we proposed to revise § 413.24(f)(5)(i) by removing the reference to the Provider Cost Reimbursement Questionnaire so that § 413.24(f)(5)(i) no longer states that a cost report will be rejected for lack of supporting documentation if it does not include a Provider Cost Reimbursement Questionnaire (Form CMS-339). Furthermore, we proposed to add language to the first sentence of § 413.24(f)(5)(i) to clarify that a provider must submit all necessary supporting documents for its cost report. We stated in the proposed rule that we believe the proposal is consistent with the recordkeeping requirements in §§ 413.20 and 413.24.

Comment: Several commenters supported the incorporation of the Provider Cost Reimbursement Questionnaire, Form CMS-339 into the OPO and Histocompatibility Laboratory cost report, Form CMS-216 because of the ease of completing the Provider Cost Reimbursement Questionnaire as an incorporated worksheet within the Medicare cost report.

Response: We appreciate the commenters' support for our proposals.

Comment: Many commenters agreed with the proposal to add language to the first sentence of § 413.24(f)(5)(i) to clarify that a provider must submit all necessary

supporting documents for its cost report. Some commenters who were in agreement cited the need for data integrity within the Medicare cost report. However, several commenters disagreed with the proposal, citing increased burden upon providers to submit all necessary supporting documents for its cost report at the time of the cost report submission. Some commenters believed the supporting documents should only be submitted to the contractor during an audit of the cost report. Several commenters stated that the cost report should not be rejected when the provider fails to submit it with the supporting documentation.

Response: We agree with the commenters that accuracy of the data reported in the Medicare cost report is necessary. We note that many Medicare payment systems are based upon data reported in the cost report. We disagree with the commenters that submitting supporting documents with the cost report is burdensome, as these data are recorded and maintained by the provider and are available to providers at the time of completion of the Medicare cost report. This documentation that is recorded and maintained by the provider is necessary to complete the cost report and supports the amounts reported in the cost report. When a cost report is audited, the provider's records are tested for accuracy and at that point additional detailed documents may be requested. Because not all cost reports are audited, the submission of supporting documents that agree with the amounts reported in the cost report at the time of submission is necessary so that contractors can pay providers promptly and accurately.

After consideration of the public comments we received, for the reasons discussed above and in the proposed rule, we are finalizing our proposal, without modification, to

incorporate the Provider Cost Reimbursement Questionnaire, Form CMS-339 into the OPO and Histocompatibility Laboratory cost report, Form CMS-216, and to revise § 413.24(f)(5)(i) by removing the reference to the Provider Cost Reimbursement Questionnaire so that § 413.24(f)(5)(i) no longer states that a cost report will be rejected for lack of supporting documentation if it does not include a Provider Cost Reimbursement Questionnaire (Form CMS-339). In addition, we are finalizing the addition of language to the first sentence of § 413.24(f)(5)(i) to clarify that a provider must submit all necessary supporting documents for its cost report.

## 2. Intern and Resident Information System (IRIS) Data

Section 413.24(f)(5)(i) also provides that a Medicare cost report for a teaching hospital is rejected for lack of supporting documentation if the cost report does not include a copy of the Intern and Resident Information System (IRIS) diskette.

Section 1886(h) of the Act, as added by section 9202 of the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA), Pub. L. 99–272, establishes a methodology for determining payments to hospitals for the GME programs (which is currently implemented in the regulations at 42 CFR 413.75 through 413.83). To account for the higher indirect patient care costs of teaching hospitals relative to nonteaching hospitals, section 1886(d)(5)(B) of the Act provides for a payment adjustment known as the IME adjustment under the IPPS for hospitals that have residents in an approved GME program. The regulation regarding the calculation of this additional payment is located at 42 CFR 412.105. (We refer readers to sections IV.E. and L. of the preamble of this final rule for additional background on IME and direct GME payments.)

In accordance with § 413.78(b) for direct GME and § 412.105(f)(1)(iii)(A) for IME, no individual may be counted as more than one full-time equivalent (FTE). A hospital cannot claim the time spent by residents training at another hospital; if a resident spends time in more than one hospital or in a nonprovider setting, the resident counts as a partial FTE based on the proportion of time worked at the hospital to the total time worked. A part-time resident counts as a partial FTE based on the proportion of allowable time worked compared to the total time necessary to fill a full-time internship or residency slot.

In 1990, we established the IRIS, under the authority of sections 1886(d)(5)(B) and 1886(h) of the Act, in order to facilitate proper counting of FTE residents by hospitals that rotate their FTE residents from one hospital or nonprovider setting to another. Teaching hospitals use the IRIS to collect and report information on residents training in approved residency programs. Section 413.24(f)(5)(i) requires teaching hospitals to submit the IRIS data along with their Medicare cost reports in order to have an acceptable cost report submission. The IRIS can be downloaded from CMS' website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/IRIS/index.html?redirect=/iris>. We are currently in the process of producing a new Extensible Markup Language (XML)-based IRIS file format that captures FTE resident count data consistent with the manner in which FTEs are reported on the Medicare cost report.

After receiving the IRIS data along with each teaching hospital's cost report, the contractors upload the data to a national database housed at CMS, which can be used to

identify “duplicates,” that is, FTE residents being claimed by more than one hospital for the same rotation. Identifying duplicates allows the contractors to approach the hospitals that simultaneously claimed the same FTE, and correct the duplicate reporting on the respective hospitals’ cost reports for direct GME and IME payment purposes.

Historically, we would collect the IRIS data from hospitals on a diskette, as referenced in § 413.24(f)(5)(i). Because diskettes are no longer used by providers to furnish these data to contractors, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20545 and 20546), we proposed to remove the reference in the regulations to a diskette and instead reference “Intern and Resident Information System data.” Specifically, we proposed to amend § 413.24(f)(5)(i) by adding a new paragraph (A) to include this proposed revised language (83 FR 20546).

In addition, to enhance the contractors’ ability to review duplicates and to ensure residents are not being double-counted, we stated that we believe it is necessary and appropriate to require that the total unweighted and weighted FTE counts on the IRIS for direct GME and IME respectively, for all applicable allopathic, osteopathic, dental, and podiatric residents that a hospital may train, must equal the same total unweighted and weighted FTE counts for direct GME and IME reported on Worksheet E-4 and Worksheet E, Part A. The need to verify and maintain the integrity of the IRIS data has been the subject of reviews by the Office of the Inspector General (OIG) over the years. An August 2014 OIG report cited the need for CMS to develop procedures to ensure that no resident is counted as more than one FTE in the calculation of Medicare GME payments (OIG Report No. A-02-13-01014, August 2014). More recently, a July 2017

OIG report recommended that procedures be developed to ensure that no resident is counted as more than one FTE in the calculation of Medicare GME payments (OIG Report No. A-02-15-01027, July 2017).

Therefore, effective for cost reports filed on or after October 1, 2018, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20546), we proposed to add the requirement that IRIS data contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME and IME FTE residents reported in the cost report. Specifically, we proposed to specify in a new paragraph (A) of § 413.24(f)(5)(i) that, effective for cost reports filed on or after October 1, 2018, the IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital's cost report, or the cost report will be rejected for lack of supporting documentation (83 FR 20569).

Comment: Some commenters expressed concern that the current IRIS does not calculate the total amounts of direct GME FTE and IME FTE residents, leaving teaching hospitals unable to ensure that the IRIS direct GME FTE totals and the IME FTE totals are the same as what a teaching hospital reports in its hospital cost report. The commenters suggested that the IRIS program be updated to calculate the total resident FTEs.

Response: We understand and agree with the commenters' concerns that the current IRIS program does not calculate the totals of the hospital's resident FTEs and therefore it would be difficult to require that a hospital's resident FTEs in the IRIS equate

to the resident FTEs in the hospital's cost report. The number of direct GME FTE residents and IME FTE residents in the current IRIS is self-reported by the teaching hospitals from their resident data records. We believe that the IRIS data should represent the total of direct GME FTE residents, weighted and unweighted, and the total of IME FTE residents. As we noted in the proposed rule, we are in the process of producing a new XML-based IRIS that will capture FTE resident count data consistent with the manner in which FTEs are reported on the Medicare cost report. It was our intention that the new XML-based IRIS would capture both weighted and unweighted direct GME FTE and IME FTE residents and totals. It was also our intention that the new XML-based IRIS would be available by October 1, 2018 and that hospitals would be able to comply with our proposal by ensuring that the weighted and unweighted direct GME FTE and IME FTE residents and totals calculated in the new XML-based IRIS would correspond with the weighted and unweighted direct GME FTE and IME FTE residents and totals the hospital reports in its cost report. However, because of extenuating circumstances, the new XML-based IRIS will not be able to calculate the GME (weighted and unweighted) FTE counts and IME FTE counts by October 1, 2018. Therefore, due to the concerns expressed in the comments, we are not finalizing our proposal that a teaching hospital's IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital's cost report, or the cost report will be rejected for lack of supporting documentation. We will consider making this proposal at a future

time when the new XML-based IRIS has the capability to capture the total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents.

As we noted in the proposed rule, teaching hospitals no longer submit IRIS data on diskettes. Instead, teaching hospitals submit IRIS data with their cost reports in order to have an acceptable cost report. In this final rule, we are finalizing a change to the regulation at § 413.24 to specify that, in order for teaching hospitals to have an acceptable cost report, teaching hospitals must submit their IRIS “data,” given that IRIS diskettes are no longer used by providers to furnish these data to contractors.

Comment: A few commenters suggested that the goal of ensuring that resident FTEs are not double counted requires a review of all hospitals that train residents and can only be done by the contractors during the cost report review and reconciliation period.

Response: We agree that ensuring that resident FTEs are not double counted among hospitals requires a review of IRIS data for all hospitals that train residents, and the review of these data is completed by the contractors during the cost report review and reconciliation period. We believe the current IRIS can be used to ascertain duplicate counting of resident FTEs, by ensuring that the IRIS FTE counts correspond to the FTE counts reported in the teaching hospital’s cost report. However, any review of these data first requires that the data reported in the hospital’s cost report be accurate and correspond to what is reported in the IRIS.

Comment: One commenter requested that the hospital cost report and the IRIS have abilities to differentiate between new residents and those residents in existing

resident programs as a way to account for instances when the number of a hospital's resident FTEs may exceed the hospital's FTE slots.

Response: We agree with the commenter's objective to account for instances when the number of a hospital's resident FTEs may exceed its resident FTE slots. However, there is no requirement that the cost report FTE count be limited to the number of accredited slots. There is a general rule that only residents training in accredited programs can be reported. There are times when a hospital trains more residents in a program than the number of residents the program is actually accredited for, and if they do, hospitals are supposed to inform the ACGME of such an occurrence. Therefore, even in the case where the number of FTEs exceeds the accredited slots, the FTEs represented in IRIS should equal the cost report count.

Comment: One commenter expressed concern that the Medicare Cost Report e-Filing (MCR eF) program requires IRIS data as a separate upload and suggested building a functionality in MCR eF that would read the IRIS uploaded data and compare the data to what is reported in the cost report and produce an immediate flag upon the cost report submission if the IRIS data do not match.

Response: We appreciate the commenter's suggestion to build a functionality in MCR eF that would read the IRIS uploaded data and compare them to what is reported in the cost report. We will explore this suggestion in the future with regard to the MCR eF program and the feasibility for it to interface with the new XML-based IRIS program.

Comment: One commenter asked whether providers would be required to purchase the new XML-based IRIS program.

Response: We appreciate the commenter's inquiry and assure that the new XML-based IRIS software will be available for hospitals' use at no cost. However, as we explain earlier, we are not finalizing our proposal that the IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital's cost report, pending development of the new XML-based IRIS file and completion of the Paperwork Reduction Act (PRA) approval process. Providers will have an opportunity to comment during the comment period that is specified in the IRIS PRA notice.

Comment: Some commenters requested clarification of the effective date of the proposed provision that the IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital's cost report, or the cost report will be rejected for lack of supporting documentation.

Response: We stated in the proposed rule that the effective date for the proposed provision that the IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital's cost report, or the cost report will be rejected for lack of supporting documentation, would be for cost reports filed on or after October 1, 2018. However, as explained above, because the new XML-based IRIS program is not yet available, we are not finalizing this portion of the proposal.

After consideration of the public comments we received, for the reasons discussed earlier and in the proposed rule, we are finalizing our proposals with modifications. As proposed, we are removing the reference in the regulations to an IRIS diskette and instead referencing “Intern and Resident Information System data.” Specifically, we are amending § 413.24(f)(5)(i) by adding a new paragraph (A) to provide that a teaching hospital’s cost report is rejected for lack of supporting documentation if the cost report does not include the IRIS data. For the reasons discussed above, we are not finalizing our proposal that the IRIS data must contain the same total counts of direct GME FTE residents (unweighted and weighted) and of IME FTE residents as the total counts of direct GME FTE and IME FTE residents reported in the hospital’s cost report, or the cost report will be rejected for lack of supporting documentation.

### 3. Medicare Bad Debt Reimbursement

Under section 1861(v)(1) of the Act and the regulations at § 413.89, Medicare may reimburse a portion of the uncollectible deductible and coinsurance amounts to those entities eligible to receive reimbursement for Medicare bad debt. The Medicare Provider Reimbursement Manual (PRM-1, CMS Pub. 15-1), Chapter 3, provides guidance to providers that claim Medicare bad debt reimbursement.

Section 413.24(f)(5)(i) provides that an acceptable cost report submission requires the provider to submit a Provider Cost Reimbursement Questionnaire, Form CMS-339. The Form CMS-339, which has been incorporated into all Medicare cost reports (except the OPO and Histocompatibility Laboratory cost report, Form CMS-216, which we proposed (and are finalizing) to incorporate into the cost report, as discussed in section

IX.B.1. of the preamble of the proposed rule and this final rule), requires the provider to submit supporting documentation with the cost report to substantiate its claims for Medicare bad debt reimbursement. For example, the hospital cost report, which incorporated the Form CMS-339, instructs hospitals to submit a “completed Exhibit 2 or internal schedules duplicating the documentation requested on Exhibit 2 to support the bad debts claimed” (Section 4004.2 of CMS Pub. 15-2). This “completed Exhibit 2 or internal schedules duplicating the documentation requested on Exhibit 2 to support the bad debts claimed” is also known as the Medicare bad debt listing and requires information such as the patient’s name, dates of service, the beneficiary’s Medicaid status, if applicable, the date that collection effort ceased, and the deductible and coinsurance amounts.

Because the Provider Cost Reimbursement Questionnaire is incorporated into the cost report as a worksheet, the bad debt listing continues to be required for an acceptable cost report under § 413.24(f)(5). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20547 and 20548), we proposed to require that the Medicare bad debt listing correspond to the bad debt amount claimed in the provider’s cost report, in order for the provider to have an acceptable cost report submission under § 413.24(f)(5). We stated that this proposal is also consistent with a provider’s recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, and will facilitate the contractor’s review and verification of the cost report. Specifically, we proposed to amend § 413.24(f)(5)(i) by adding a new paragraph (B) to specify that, effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming Medicare bad debt reimbursement, a

cost report would be rejected for lack of supporting documentation if it does not include a detailed bad debt listing that corresponds to the bad debt amounts claimed in the provider's cost report.

Comment: Some commenters generally supported the proposal, while other commenters suggested that a standardized format be established and required for the submission of the bad debt listing that corresponds to the bad debt amounts claimed in the provider's cost report. One commenter suggested that the format of the bad debt list follow the format of the bad debt listing from the exhibit to the Form CMS-339.

Response: We appreciate the commenters' support and agree with the suggestion that a standardized format be required for the submission of the bad debt listing. The standardized format, that we will continue to use, for the bad debt listing is currently submitted by the provider as a required exhibit to the CMS Form-339 which, with the finalization of this rule, will be incorporated into all of the Medicare cost reports in the Provider Reimbursement Manual (PRM-2, CMS Pub. 15-2). We will continue to use the exhibit to the incorporated CMS Form-339 as the standardized format of the bad debt listing. Any amendments to the format of the bad debt listing will be published with amendments to the cost report in the PRM-2, CMS Pub. 15-2.

Comment: Some commenters cited the need to revise the bad debt listing following the submission of the cost report and suggested that cost reports be permitted to be amended for this purpose.

Response: We disagree that the bad debt listing needs to be revised following the submission of the cost report. Providers are required under § 413.20(a) to maintain

sufficient financial records and statistical data for proper determination of costs payable under the program. It is our expectation that the bad debt listing providers use to complete the cost report and that they submit with the cost report is complete and accurate. The Provider Reimbursement Manual, CMS Pub. 15-1, Chapter 3, section 314, provides that uncollectible deductibles and coinsurance amounts are recognized as allowable bad debts in the reporting period in which the debts are determined to be worthless. Because, pursuant to § 413.24(f)(2)(i), cost reports are due on or before the last day of the fifth month following the close of the period covered by the report, we believe there is sufficient time for the provider to accurately report bad debts. However, pursuant to 42 CFR 405.1885(a), providers are permitted, and contractors have the discretion to grant, a reopening of a contractor determination in order to revise an item in the cost report. Also, pursuant to § 413.24(f), amended cost reports to revise cost report information that has been previously submitted by a provider may be permitted by the contractor.

Comment: Other commenters suggested that the bad debt listing be submitted only when the cost report is audited instead of being submitted with the cost report as a supporting documentation in order to have an acceptable cost report.

Response: We disagree that the bad debt listing should only be submitted when the cost report is audited. Because not all cost reports are audited, the submission of the bad debt listing with the cost report is necessary for contractors to ensure the veracity and accuracy of the bad debts claimed in the cost report and to ensure there is no duplicate reporting of bad debts from a provider's prior fiscal year cost report.

After consideration of the public comments we received, for the reasons discussed earlier and in the proposed rule, we are finalizing our proposals without modification. Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming Medicare bad debt reimbursement, a cost report will be rejected for lack of supporting documentation if it does not include a detailed bad debt listing that corresponds to the bad debt amounts claimed in the provider's cost report.

#### 4. Disproportionate Share Hospital (DSH) Payment Adjustment

The DSH payment adjustment provision under section 1886(d)(5)(F) of the Act was enacted by section 9105 of COBRA and became effective for discharges occurring on or after May 1, 1986. Under section 1886(d)(5)(F) of the Act, the primary method by which a hospital qualifies for a Medicare DSH payment is based on the hospital's disproportionate patient percentage, which is determined using a statutory formula. This statutory formula incorporates the hospital's number of patient days for patients who are eligible for Medicaid, but were not entitled to benefits under Medicare Part A ("Medicaid eligible days"), which hospitals are required to submit on their cost reports.

Currently, in order for a DSH eligible hospital to have an acceptable cost report submission, there is no requirement for the hospital to also submit a listing of its Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report, as a supporting document. DSH eligible hospitals have always been required to collect and maintain these data for completion of the cost report, and to submit it when requested. However, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20547), we proposed that, in order to have an acceptable cost report submission,

DSH eligible hospitals must submit these supporting data with their cost reports. We indicated that, to ensure accurate DSH payments, additional information regarding Medicaid eligible days is required in order to validate the number of Medicaid eligible days the hospital reports in its cost report. Currently, when this information regarding Medicaid eligible days is not submitted by the DSH eligible hospitals with the cost report, contractors must request it. An audit may reveal an overstatement of a hospital's Medicaid eligible days. However, we stated that an audit of these data may not take place for more than a year after the cost report has been submitted, and tentative program reimbursement payments are often issued to a provider upon the submission of the cost report. Because the existing burden estimate for a DSH eligible hospital's cost report already reflects the requirement that these hospitals collect, maintain, and submit these data when requested, we stated in the proposed rule that there is not additional burden.

We explained in the proposed rule (83 FR 20547) that requiring a provider to submit, as a supporting document with its cost report, a listing of the provider's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the DSH eligible hospital's cost report would provide contractors with the DSH eligible hospital's source document listing the Medicaid eligible days claimed on its cost report and would be consistent with the recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, which require a provider to substantiate its costs. A requirement to submit this supporting documentation also would facilitate the contractor's review and verification of the cost report without the need to request additional data from the provider. We stated in the proposed rule that this proposal would not affect a hospital's ability to submit an

amended cost report, within 12 months after the hospital's cost report is due, that reflects updated information on Medicaid eligible patient days after the hospital receives updated Medicaid eligibility information from the State (CY 2016 OPPS/ASC final rule with comment period (80 FR 70560)).

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed that, effective for cost reporting periods beginning on or after October 1, 2018, in order for a hospital eligible for a Medicare DSH payment adjustment to have an acceptable cost report submission in accordance with § 413.24(f)(5), the provider must submit a detailed listing of its Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the provider's cost report, as a supporting document with the provider's cost report. In addition, we proposed that if the provider submits an amended cost report that changes its Medicaid eligible days, an amended listing or an addendum to the original listing of the provider's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the provider's amended cost report would also need to be submitted as a supporting document with the amended cost report.

Consistent with this proposal, we proposed to amend § 413.24(f)(5)(i) by adding a new paragraph (C) to specify that, effective for cost reporting periods beginning on or after October 1, 2018, for hospitals claiming a DSH payment adjustment, a cost report will be rejected for lack of supporting documentation if it does not include a detailed listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report. If the hospital submits an amended cost report that changes its Medicaid eligible days, an amended listing or an addendum to the

original listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's amended cost report would be required.

Comment: Some commenters pointed out that, in some instances, the State may not have made information regarding the Medicaid eligible days available to the provider at the time the cost report is submitted and that hospitals have the ability to submit an amended cost report within 12 months after the hospital's cost report is due that reflects updated information on Medicaid eligible patient days if the hospital receive updated Medicaid eligibility information from the State (CY 2016 OPPS/ASC final rule with comment period (80 FR 70560)). Commenters expressed opposition to the requirement that hospitals submit a listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report because it would require the provider to submit knowingly incomplete information with the cost report and also would require a duplication of efforts if an amended cost report is submitted with an updated listing of the Medicaid eligible days in the 12 months following the hospital's cost report due date.

Response: We disagree with the commenters' assertion that our proposal would require that the provider knowingly submit incomplete information if a hospital were to submit the cost report with a listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report. The proposal to require a hospital to submit a listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report does not require providers to submit incomplete information. Currently, the provider is

required to submit the cost report with the known Medicaid eligible days for the hospital's fiscal year. This proposal would require hospitals to substantiate those days by requiring the hospital to also submit a listing of the hospital's Medicaid eligible days that corresponds to the days claimed in the hospital's cost report. This requirement would not change the current requirements with respect to reporting on the cost report of the Medicaid eligible days known by the hospital at the time of the cost report submission. If the Medicaid eligible days change once the hospital receives the documentation from the State, the hospital may amend its cost report. The contractor must accept the amended cost report with the amended listing of the Medicaid eligible days that substantiates the revised Medicaid eligible days reported in the amended cost report if it is submitted within 12 months after the hospital's cost report is due. As a result, the requirement that hospitals submit a listing of the Medicaid eligible days with their cost report does not require the hospital to perform any duplicative actions and, in fact, only requires that in the case where a hospital submits an amended cost report that changes its Medicaid eligible days, the hospital also submit documentation to support the additional Medicaid days.

Comment: One commenter requested that hospitals that are DSH eligible, but do not actually receive DSH, be excluded from the requirement to submit a listing of the Medicaid eligible days that substantiates the Medicaid eligible days reported in the hospital's cost report. The commenter provided sole community hospitals (SCHs) and Medicare dependent small rural hospitals (MDHs) as an example and requested that they be excluded.

Response: We agree with the commenter that the requirement to submit a listing of the Medicaid eligible days that corresponds to the Medicaid eligible days reported in the hospital's cost report is not applicable to SCHs that are paid under the hospital-specific rate and are not eligible to receive DSH payment adjustments. However, because MDHs are eligible to receive DSH payment adjustments, this proposal applies to them if they are claiming a DSH payment adjustment. Similarly, an SCH that is not paid under its hospital-specific rate and is eligible to receive a DSH payment adjustment must submit a listing of the Medicaid eligible days that corresponds to the Medicaid eligible days reported in the hospital's cost report if it is claiming a DSH payment adjustment.

After consideration of the public comments we received, for the reasons discussed earlier and in the proposed rule, we are finalizing our proposals without modification. Therefore, effective for cost reporting periods beginning on or after October 1, 2018, for hospitals claiming a disproportionate share payment adjustment, a cost report will be rejected for lack of supporting documentation if it does not include a detailed listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report. In addition, if the hospital submits an amended cost report that changes its Medicaid eligible days, the hospital must submit an amended listing or an addendum to the original listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's amended cost report. We are finalizing § 413.24(f)(5)(i)(C) as proposed to reflect these policies.

## 5. Charity Care and Uninsured Discounts

Section 3133 of the Affordable Care Act amended the Medicare DSH payment adjustment provision at section 1886(d)(5)(F) of the Act, and established section 1886(r) of the Act which provides for an additional payment that reflects a hospital's uncompensated care (which includes charity care and discounts given to uninsured patients who qualify under the hospital's charity care policy or financial assistance policy). In accordance with the FY 2018 IPPS/LTCH PPS final rule (82 FR 38201 through 38208), starting in FY 2018, Worksheet S-10 of the cost report is used as a data source for calculating uncompensated care payments.

Currently there is no requirement for a DSH eligible hospital to submit supporting documentation with its cost report, to substantiate its charity care or discounts given to uninsured patients who qualify under the hospital's charity care policy or financial assistance policy, in order for its cost report submission to be acceptable in accordance with § 413.24(f)(5). Uncompensated care data reported on a hospital's cost report did not have an impact on the determination of uncompensated care payments before FY 2018 when the agency first began using Worksheet S-10 data to calculate uncompensated care payments. However, because the Worksheet S-10 data are now utilized to make uncompensated care payments to DSH-eligible hospitals, documentation to substantiate charity care or discounts given to uninsured patients who qualify under the hospital's charity care or financial assistance policy is needed to complete the cost report and to ensure there is no duplication when hospitals report Medicare bad debt, charity care, and uninsured discounts. All hospitals, including DSH eligible hospitals, have always been

required to collect and maintain these data for completion of the cost report, and submit it when requested. However, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20547 and 20548), we proposed that, in order to have an acceptable cost report submission, DSH eligible hospitals must submit these supporting data with their cost reports. We stated that, to ensure accurate uncompensated care payments, additional supporting information regarding charity care and uninsured discounts is required in order to validate the amounts reported in the cost report. Currently, when the documentation to support the charity care charges and uninsured discounts is not submitted by DSH eligible hospitals with the cost report, contractors must request it. We stated that because the existing burden estimate for a DSH eligible hospital's cost report already reflects the requirement that these hospitals collect, maintain, and submit these data when requested, there is no additional burden.

We stated in the FY 2019 IPPS/LTCH PPS proposed rule that we believe that requiring a DSH eligible hospital to submit, with its cost report, a detailed listing of its charity care and uninsured discounts that corresponds to the amount claimed in the hospital's cost report would be consistent with the recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, which require a provider to substantiate its costs. We stated that this supporting documentation also would facilitate the contractor's review and verification of the cost report without the need to request additional data from the provider.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed that, effective for cost reporting periods beginning on or after October 1, 2018, in order for

hospitals reporting charity care and/or uninsured discounts to have an acceptable cost report submission under § 413.24(f)(5), the provider must submit a detailed listing of charity care and/or uninsured discounts that contains information such as the patient name, dates of service, insurer (if applicable), and the amount of charity care and/or uninsured discount given that corresponds to the amount claimed in the hospital's cost report as a supporting document with the hospital's cost report.

Consistent with this proposal, we proposed to amend § 413.24(f)(5)(i) by adding a new paragraph (D) to specify that, effective for cost reporting periods beginning on or after October 1, 2018, for hospitals reporting charity care and/or uninsured discounts, a cost report will be rejected for lack of supporting documentation if it does not include a detailed listing of charity care and/or uninsured discounts that corresponds to the amounts claimed in the provider's cost report.

Comment: Some commenters supported the proposal while other commenters believed it was burdensome for providers to submit the supporting documentation that corresponds to the amounts claimed in the provider's cost report for charity care and/or uninsured discounts at the time of the cost report submission.

Response: We appreciate the commenters' support. We disagree that requiring hospitals that report charity care and/or uninsured discounts to submit the supporting documentation that corresponds to the amounts claimed in the provider's cost report for charity care and/or uninsured discounts is burdensome to providers. As stated in the FY 2019 IPPS/LTCH PPS proposed rule, we believe that requiring a DSH eligible hospital to submit, with its cost report, a detailed listing of its charity care and/or

uninsured discounts that corresponds to the amount claimed in the hospital's cost report is consistent with the recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, which require a provider to maintain records of its cost data and produce them to substantiate its costs. These data must be recorded and maintained by the provider and are available to providers at the time of completion of the Medicare cost report. In previous years, we have received many comments in response to IPPS proposed rules where stakeholders have requested that CMS ensure the accuracy of the amounts providers report on the Worksheet S-10, and that are used to calculate uncompensated care. Because not all cost reports are audited, the submission of supporting documents with the cost report that correspond to the amounts reported in the cost report for charity care and/or uninsured discounts is necessary so that contractors can pay providers promptly and accurately.

Comment: Some commenters suggested that CMS establish a standardized format that hospitals would be required to use when submitting the supporting documentation for the charity care and/or uninsured discounts that corresponds to the amounts claimed in their cost report. Commenters believed that including such a requirement would ensure consistency of the supporting documentation submitted by hospitals.

Response: We agree that a standardized format should be established and required for the submission of the supporting documentation for the charity care and/or uninsured discounts that corresponds to the amounts claimed in the provider's cost report. We agree that requiring this information to be submitted in a standardized format would

ensure consistency of the documentation and facilitate the contractor's review and verification of the cost report. As stated in the FY 2019 IPPS/LTCH PPS proposed rule, for hospitals reporting charity care and/or uninsured discounts, we believe the documentation must include information such as the patient name, dates of service, insurer (if applicable), and the amount of the charity care and/or uninsured discount given to the patient that corresponds to the amounts reported in the hospital's cost report. We will work toward developing a standard format to include in a subsequent Paperwork Reduction Act (PRA) notice to request public comment. Until a standard format is adopted, in order to have an acceptable cost report submission, hospitals should submit a listing that includes information, such as the aforementioned data elements, with its cost report submission as necessary to support the amounts reported in their cost report.

Comment: One commenter indicated that a hospital's submission of a detailed listing of the hospital's charity care/uninsured discounts with its cost report would be time and resource intensive.

Response: We disagree that a hospital's submission of a listing of charity care/uninsured discounts that corresponds to the amount of the charity care and/or uninsured discounts reported in the hospital's cost report would be time consuming and resource intensive. As previously stated, this is information already in the possession of hospitals, developed in the normal course of hospital operations, and is already needed in order to report charity care and/or uninsured discounts on the Worksheet S-10 of the cost report. As a result, the proposal would simply require a hospital to submit this supporting

documentation, which has already been developed in the normal course of hospital operations, with its cost report in order to have an acceptable cost report submission.

After consideration of the public comments we received, for the reasons discussed earlier and in the proposed rule, we are finalizing our proposed policy, without modification, that, effective for cost reporting periods beginning on or after October 1, 2018, for DSH eligible hospitals reporting charity care and/or uninsured discounts, a cost report will be rejected for lack of supporting documentation if it does not include a detailed listing of charity care and/or uninsured discounts that corresponds to the amounts claimed in the hospital's cost report. We are finalizing § 413.24(f)(5)(i)(D) as proposed to reflect this final policy. In addition, as discussed earlier, until a standard format is adopted, a hospital must submit a listing with its cost report submission that supports the amounts reported in its cost report including information, such as: patient name, dates of service, insurer (if applicable), and the amount of the charity care and/or uninsured discount given to the patient.

#### 6. Home Office Allocations

A chain organization consists of a group of two or more health care facilities which are owned, leased, or through any other device, controlled by one organization (Provider Reimbursement Manual 1 (PRM-1), CMS Pub. 15-1, Chapter 21, Section 2150). Chain organizations include, but are not limited to, chains operated by proprietary organizations and chains operated by various religious, charitable, and governmental organizations. A chain organization may also include business organizations which are engaged in other activities not directly related to health care.

When a provider claims costs on its cost report that are allocated from a home office (also known as a chain home office or chain organization), the Home Office Cost Statement constitutes the documentary support required of the provider to be reimbursed for home office costs in the provider's cost report as set forth in Section 2153, Chapter 21, of the PRM-1. Section 2153 states that each contractor servicing a provider in a chain must be furnished with a detailed Home Office Cost Statement as a basis for reimbursing the provider for cost allocations from a home office or chain organization. However, many cost reports that have home office costs allocated to them are submitted without a Home Office Cost Statement as a supporting document. In addition, there are home offices or chain organizations that are not completing a Home Office Cost Statement to support the costs they are allocating to the provider cost reports. Lack of this documentation should result in a disallowance of costs. It is our understanding that some providers paid under a PPS mistakenly believe that a Home Office Cost Statement is no longer required. However, the home office costs reported in the provider's cost report may have an impact on future rate-setting and payment refinement activities. We stated in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20748) that we believe that requiring a home office or chain organization to complete a Home Office Cost Statement and a provider to submit, with its cost report, a copy of the Home Office Cost Statement completed by the home office or chain organization that corresponds to the amounts allocated from the home office or chain organization to the provider's cost report, is consistent with Section 2153 of the PRM-1 and would be consistent with a provider's

recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, which require a provider to substantiate its costs.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, we proposed that, effective for cost reporting periods beginning on or after October 1, 2018, in order for a provider claiming costs on its cost report that are allocated from a home office or chain organization to have an acceptable cost report submission under § 413.24(f)(5), a Home Office Cost Statement completed by the home office or chain organization that corresponds to the amounts allocated from the home office or chain organization to the provider's cost report must be submitted as a supporting document with the provider's cost report. We stated that this proposal would facilitate the contractor's review and verification of the cost report without needing to request additional data from the provider. We stated that with our proposal, we anticipate more providers will submit the Home Office Cost Statement to support the amounts reported in their cost reports, in order to have an acceptable cost report submission. We further stated that because the existing burden estimate for a provider's cost report already reflects the requirement that providers collect, maintain, and submit these data, there is no additional burden.

Consistent with this proposal, we proposed to amend § 413.24(f)(5)(i) by adding a new paragraph (E) to specify that, effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization, a cost report will be rejected for lack of supporting documentation if it does not include a Home Office Cost Statement completed

by the home office or chain organization that corresponds to the amounts allocated from the home office or chain organization to the provider's cost report.

Comment: A few commenters supported this proposal. However, several commenters indicated that the proposal was not feasible because a home office may have a fiscal year that differs from the fiscal year of the providers in its chain. The commenters stated that because of the possible differing fiscal years, a Home Office Cost Statement may not include all costs allocated from the home office to the provider for the time period covering a provider's cost report, requiring the provider to submit the Home Office Cost Statement that is subsequently due that covers the remaining time period of the provider's cost report.

Response: We acknowledge the commenters' concerns that where a provider and its home office have differing fiscal year ends, a Home Office Cost Statement may not be available to substantiate all of a provider's costs. For example, a provider with a fiscal year that begins on October 1, 2018 and ends on September 30, 2019, whose home office has a fiscal year that begins on January 1 and ends on December 31 of each year, may have a portion of costs allocated to it from the Home Office Cost Statement that begins on January 1, 2018 and ends on December 31, 2018 and a portion of costs allocated to it from the Home Office Cost Statement that begins on January 1, 2019 and ends on December 31, 2019. We understand the provider's concern and are revising the regulation text of proposed § 413.24(f)(5)(i)(E) to provide that when the provider and its home office have differing fiscal year ends, the provider's home office costs for a portion of the cost reporting period (as reflected on the Home Office Cost Statement) must

correspond to a portion of the amount reported in the provider's cost report. When the provider and its home office have the same fiscal year end, the provider's home office costs for the same time period (as reflected on the Home Office Cost Statement) must correspond to the costs reported in the provider's cost report.

Comment: Some commenters suggested that the Home Office Cost Statement be submitted by the chain's home office on behalf of all providers in the chain instead of requiring each provider in the chain to submit a Home Office Cost Statement with its cost report, in order to ensure accuracy and reduce burden to the providers in a chain.

Response: We appreciate the commenters' concerns regarding reducing burden to the providers in a chain organization and ensuring accuracy when a provider substantiates costs allocated to it from its home office. We agree with the commenters' suggestion that the home office should instead submit the Home Office Cost Statement directly to the servicing contractors for its providers when the home office has allocated costs to its providers, instead of requiring the providers to submit the Home Office Cost Statement individually with their cost report submission. Requiring the home office to instead submit the Home Office Cost Statement to the servicing contractors of its providers will reduce burden upon the individual providers within a chain organization by not requiring each provider within the chain to submit the Home Office Cost Statement with its cost report submission. Because the Home Office Cost Statement lists the providers in the chain and each of the providers' servicing contractors, the contractors to whom the Home Office Cost Statement should be sent are known to the home office. We plan to update the PRM to reflect this policy.

Comment: One commenter suggested that requiring the Home Office Cost Statement submission with the provider's cost report will make the information contained in the Home Office cost statement subject to a Freedom of Information Act (FOIA) request as opposed to the information currently being protected and exempt from a FOIA request.

Response: We appreciate the commenters' concerns. The policy finalized in this final rule, as discussed below, does not affect whether a Home Office Cost Statement may or may not be produced in response to a FOIA request. We note that both the proposed and finalized policy requires that the provider substantiate costs allocated to it from its home office in order to have an acceptable cost report.

After consideration of the public comments we received, for the reasons discussed earlier and in the proposed rule, we are finalizing our proposal with modifications as follows: First, instead of requiring providers to submit the Home Office Cost Statement individually with their cost report submission, we are requiring instead that the home office or chain organization submit the Home Office Cost Statement directly to the servicing contractors for its providers when the home office or chain organization has allocated costs to its providers. When the home office submits its Home Office Cost Statement to its servicing contractor, the home office must also submit a copy of the Home Office Cost Statement to each of the contractors of its chain providers. For example, if a chain organization has 25 providers serviced by 2 different contractors, the home office must submit its Home Office Cost Statement to each contractor. We note that only one copy of the Home Office Cost Statement is required to be submitted by the

home office to a provider's contractor, regardless of the number of providers in the chain the contractor is servicing. Second, we are applying different rules for situations where the provider and the home office have the same fiscal year end and where the provider and the home office have a different fiscal year end. Thus, effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization with the same fiscal year end, a cost report will be rejected for lack of supporting documentation if the home office or chain organization has not completed and submitted to the chain provider's contractor a Home Office Cost Statement that corresponds to the amounts allocated from the home office or chain organization to the provider's cost report. Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization that has a different fiscal year end, a cost report will be rejected for lack of supporting documentation if the home office or chain organization has not completed and submitted to the chain provider's contractor a Home Office Cost Statement that corresponds to some portion of the amounts allocated from the home office or chain organization to the provider's cost report. These policies are reflected in new § 413.24(f)(5)(i)(E)(1) and (2), respectively. Thus, when the provider and its home office have differing fiscal year ends, the provider's home office costs for a portion of the cost reporting period (as reflected in the Home Office Cost Statement) must correspond to a portion of the amount reported in the provider's cost report. When the provider and its home office have the same fiscal year end, the provider's home office's cost for the same time period (as reflected in the

Home Office Cost Statement) must correspond to the costs reported in the provider's cost report.

#### **X. Requirements for Hospitals to Make Public a List of Their Standard Charges via the Internet**

In the FY 2015 IPPS/LTCH proposed rule and final rule (79 FR 28169 and 79 FR 50146, respectively), we discussed the implementation of section 2718(e) of the Public Health Service Act, which aims to improve the transparency of hospital charges. We noted that section 2718(e) of the Public Health Service Act, which was enacted as part of the Affordable Care Act, requires that each hospital operating within the United States, for each year, establish (and update) and make public (in accordance with guidelines developed by the Secretary) a list of the hospital's standard charges for items and services provided by the hospital, including for diagnosis-related groups established under section 1886(d)(4) of the Social Security Act. We reminded hospitals of their obligation to comply with the provisions of section 2718(e) of the Public Health Service Act and provided guidelines for its implementation. We stated that hospitals are required to either make public a list of their standard charges (whether that be the chargemaster itself or in another form of their choice) or their policies for allowing the public to view a list of those charges in response to an inquiry.

We encouraged hospitals to undertake efforts to engage in consumer friendly communication of their charges to help patients understand what their potential financial liability might be for services they obtain at the hospital, and to enable patients to compare charges for similar services across hospitals. We also stated that we expect that

hospitals will update the information at least annually, or more often as appropriate, to reflect current charges. We further noted that we are confident that hospital compliance with this statutory transparency requirement will greatly improve the public accessibility of charge information. Finally, we stated that we would continue to review and post relevant charge data in a consumer-friendly way, as we previously have done by posting hospital and physician charge information on the CMS website.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20548 and 20549), we indicated that we are concerned that challenges continue to exist for patients due to insufficient price transparency. Such challenges include patients being surprised by out-of-network bills for physicians, such as anesthesiologists and radiologists, who provide services at in-network hospitals, and patients being surprised by facility fees and physician fees for emergency department visits. We also are concerned that chargemaster data are not helpful to patients for determining what they are likely to pay for a particular service or hospital stay. In order to promote greater price transparency for patients, we stated that we are considering ways to improve the accessibility and usability of the charge information that hospitals are required to disclose under section 2718(e) of the Public Health Service Act.

Therefore, as one step to further improve the public accessibility of charge information, effective January 1, 2019, we announced the update to our guidelines to require hospitals to make available a list of their current standard charges via the Internet in a machine readable format and to update this information at least annually, or more

often as appropriate. This could be in the form of the chargemaster itself or another form of the hospital's choice, as long as the information is in machine readable format.

We note that it was sometimes difficult to determine when certain commenters who submitted comments on the FY 2019 IPPS/LTCH PPS proposed rule were responding to the broader price transparency request for information (RFI) and when they were responding specifically to the updated guidelines. To the extent we believed that a comment addressed the updated guidelines, we summarized it below. Comments on the broader price transparency initiative and suggestions for additional future actions that we may take with the guidelines, including enforcement actions, will be addressed in future rulemaking.

Comment: Many commenters addressed the announcement of the CMS update to guidelines on price transparency. Some of these commenters supported the update and indicated that many hospitals already make their standard charges available voluntarily or under applicable State law.

Response: We appreciate the support from some commenters regarding our updated guidelines and agree that many hospitals already make their standard charges publicly available either voluntarily or under applicable State law. For example, the 2014 American Hospital Association State Transparency Survey data indicated that 35 States required hospitals to release information on some charges and 7 States relied on voluntary disclosure of charge data (<http://www.ahacommunityconnections.org/content/14transparency-trendwatch.pdf>). We also appreciate the public support for hospitals to undertake efforts to engage in

consumer friendly communication to help patients understand what their potential financial liability might be for services they obtain at the hospital, and to enable patients to compare costs for similar services across hospitals. Improving the public accessibility to charge information is one aspect of our broader price transparency initiative.

Comment: Some commenters stated that the information contained in the chargemaster would not be useful to patients and would only increase confusion, as it would not inform them of their out-of-pocket costs for a particular service. The commenters stated that the chargemaster typically contains terms that are difficult for patients to understand, does not depict negotiated discounts with insurers, and lacks contextual information that patients would need. To the extent that such information would be published in a payer-specific manner, the commenters stated that such information is proprietary and confidential, and that publishing this information could undermine competition. Some commenters stated that certain hospitals are already providing patients with cost estimates that are specific to the payer and the patient's circumstances, and suggested that hospitals be required to provide this type of information instead. Other commenters noted programs by specific hospitals, including web-based tools, which enable patients to estimate their out-of-pocket costs. Other commenters suggested that CMS focus on "shoppable" health care services that can typically be scheduled in advance. Some commenters suggested that CMS conduct further research and work with stakeholders to determine the best approach to making information available to consumers.

Response: We disagree with commenters that the information contained in the chargemaster would not be useful to patients. As pointed out by commenters, many hospitals have price transparency initiatives beyond the provision of the chargemaster and we encourage hospitals to provide context surrounding the chargemaster information. We note that we are not requiring at this time that any information be published in a payer-specific manner, and we disagree that transparent charge information undermines competition. We agree that hospitals should and can provide information on “shoppable” health care services that can typically be scheduled in advance. However, nothing in our guidelines precludes a hospital from providing this information to patients and the public. We also agree with commenters that CMS should continue to work with stakeholders to determine the best approach to making price transparency information available to consumers and we intend to do so. One step in that process is the broad request for information from the public that CMS is currently making.

We acknowledge that providing patients with more specific information on their potential financial liability is needed and commend the hospitals that already do so. However, we believe that this more specific need does not justify a delay in the provision of chargemaster information to the public. We note that making charge information more easily accessible to patients and the public does not preclude hospitals from taking additional steps or continuing to provide the information they currently provide.

Comment: Many commenters explained that, for insured patients, payers are a better source of information about the cost of care and should be the primary source of information for out-of-pocket costs for patients. Some commenters stated that payers can

provide the information that patients require without compromising competition among providers. Other commenters suggested that payers and providers work together to make this information more accessible to patients. Some commenters noted that payers can provide information as to whether patients have met the plan deductible or out-of-pocket spending limits and what their cost-sharing will be. One commenter suggested requiring insurance companies to provide cost calculators or other tools that patients can use to calculate costs specific to their situation. For uninsured patients, commenters noted that many patients receive free or discounted care through the hospital's charity care policies.

Response: With respect to the commenters who indicated that, for insured patients, payers are a better source of information about the cost of care and should be the primary source of information for out-of-pocket costs for patients, we note that nothing in our guidelines precludes hospitals and payers from working together to provide information on out-of-pocket costs for patients and to improve price transparency for patients. We also recognize that sometimes uninsured patients receive free or discounted care through a hospital's charity care policies and again commend hospitals for those policies. Nothing in our guidelines precludes a hospital from providing charity care to uninsured patients.

Comment: Several commenters expressed concern about the updated guidelines conflicting with State requirements and increasing administrative burden if hospitals are required to report charge information in multiple incongruent ways. Commenters stated that CMS should not require hospitals to duplicate or replace existing publically available resources and that the updated requirement would significantly increase provider burden

to provide information that is not useful to patients. Other commenters noted that some State efforts are already providing patients with much more information than they could obtain from a chargemaster, and suggested that CMS instead encourage State level price transparency efforts.

Response: We encourage State efforts in the area of price transparency. As noted earlier, we commend the many hospitals that already make their standard charges publicly available either voluntarily or under applicable State law. This demonstrates that the disclosure of standard charges under our updated guidelines can exist in a complementary manner with State regulatory initiatives.

Comment: Some commenters stated that the definition of standard charges is unclear, as hospitals often have many negotiated rates for the same service. The commenters identified several terms, “charges”, “payments”, “cost”, and “prices”, that, according to the commenters, can have different meanings but are often used interchangeably. The commenters believed that, absent a standard definition of these terms, patients could not make accurate comparisons between hospitals.

Response: As noted earlier, we are not at this time requiring payer-specific information under our guidelines, and our updated guidelines are unchanged in this area compared to the prior guidelines. The new guidelines, when compared to the prior guidelines, merely require that this information be made available via the Internet in a machine readable format and that hospitals update this information at least annually, or more often as appropriate.

Comment: A few commenters expressed concern that patients may forgo needed care if they were informed of the charges in advance. Other commenters noted that price information in the absence of quality information can be misleading to patients in a variety of ways.

Response: We disagree that patients may forgo needed care if they were informed of the charges in advance if that information is placed in the proper context by hospitals. We agree with the commenters that price information and quality information are both important to provide to patients. We note that nothing precludes hospitals or other entities from incorporating quality information such as the publicly available CMS Hospital Compare quality information found on the website at:

<https://www.medicare.gov/hospitalcompare/search.html>.

After consideration of the public comments we received, we currently do not believe there is a need to further update our guidelines beyond the updated guidelines that we previously announced would be effective January 1, 2019, which are that hospitals' list of standard charges be made available to the public via the Internet in a machine readable format and that hospitals update this information at least annually, or more often as appropriate.

## **XI. Revisions Regarding Physician Certification and Recertification of Claims**

Our Medicare regulations at 42 CFR 424.11, which implement sections 1814(a)(2) and 1835(a)(2) of the Act, specify the requirements for physician statements that certify and periodically recertify as to the medical necessity of certain types of covered services provided to Medicare beneficiaries. The regulation provision under

§ 424.11(c) specifies that when supporting information for the required physician statement is available elsewhere in the records (for example, in the physician's progress notes), the information need not be repeated in the statement itself. The last sentence of § 424.11(c) further provides that it will suffice for the statement to indicate where the information is to be found.

As we discussed in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20550), as part of our ongoing initiative to identify Medicare regulations that are unnecessary, obsolete, or excessively burdensome on health care providers and suppliers--and thereby free up resources that could be used to improve or enhance patient care—we have been made aware that the provisions of § 424.11(c) which state that it will suffice for the statement to indicate where the information is to be found may be resulting in unnecessary denials of Medicare claims. As currently worded, this last sentence of § 424.11(c) can result in a claim being denied merely because the physician statement technically fails to identify a specific location in the file for the supporting information, even when that information nevertheless may be readily apparent to the reviewer. We believe that continuing to require the location to be specified in this situation is unnecessary. Certifications and recertifications continue to be based on the criteria for the service being certified, and the medical record must contain adequate documentation of the relevant criteria for which the physician is providing certification or recertification, even if the precise location of the information within the medical record is not included. Moreover, the need for the precise location is becoming increasingly obsolete with the growing utilization of electronic health records (EHRs)--which, by their nature, are

readily searchable. Accordingly, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20550), we proposed to delete the last sentence of § 424.11(c). In addition, we proposed to relocate the second sentence of § 424.11(c) (indicating that supporting information contained elsewhere in the provider's records need not be repeated in the certification or recertification statement itself) to the end of the immediately preceding paragraph (b), which describes similar kinds of flexibility that are currently afforded in terms of completing the required statement.

Comment: Commenters supported the proposed changes to § 424.11(c) of the regulations.

Response: We appreciate the commenters' support.

After consideration of the public comments we received, we are finalizing, without modification, our proposed changes. Specifically, we are deleting the last sentence of § 424.11(c) and relocating the second sentence of § 424.11(c) to the end of the immediately preceding paragraph (b).

**XII. Request for Information on Promoting Interoperability and Electronic Healthcare Information Exchange through Possible Revisions to the CMS Patient Health and Safety Requirements for Hospitals and Other Medicare- and Medicaid- Participating Providers and Suppliers**

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20550 through 20553), we included a Request for Information (RFI) related to promoting interoperability and electronic health care information exchange. We received approximately 313 timely pieces of correspondence on this RFI. We appreciate the input provided by commenters.

### **XIII. MedPAC Recommendations**

Under section 1886(e)(4)(B) of the Act, the Secretary must consider MedPAC's recommendations regarding hospital inpatient payments. Under section 1886(e)(5) of the Act, the Secretary must publish in the annual proposed and final IPPS rules the Secretary's recommendations regarding MedPAC's recommendations. We have reviewed MedPAC's March 2018 "Report to the Congress: Medicare Payment Policy" and have given the recommendations in the report consideration in conjunction with the policies set forth in this final rule. MedPAC recommendations for the IPPS for FY 2019 are addressed in Appendix B to this final rule.

For further information relating specifically to the MedPAC reports or to obtain a copy of the reports, contact MedPAC at (202) 653-7226, or visit MedPAC's Web site at: <http://www.medpac.gov>.

### **XIV. Other Required Information**

#### **A. Publicly Available Files**

IPPS-related data are available on the Internet for public use. The data can be found on the CMS website at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. We listed the IPPS-related data files that are available in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20553 through 20554).

Commenters interested in discussing any data files used in construction of this final rule should contact Michael Treitel at (410) 786-4552.

## B. Collection of Information Requirements

### 1. Statutory Requirement for Solicitation of Comments

Under the Paperwork Reduction Act of 1995, we are required to provide 60-day notice in the **Federal Register** and solicit public comment before a collection of information requirement is submitted to the Office of Management and Budget (OMB) for review and approval. In order to fairly evaluate whether an information collection should be approved by OMB, section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 requires that we solicit comment on the following issues:

- The need for the information collection and its usefulness in carrying out the proper functions of our agency.
- The accuracy of our estimate of the information collection burden.
- The quality, utility, and clarity of the information to be collected.
- Recommendations to minimize the information collection burden on the affected public, including automated collection techniques.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20554 through 20564), we solicited public comment on each of these issues for the following sections of this document that contain information collection requirements (ICRs).

### 2. ICRs for Application for GME Resident Slots

The information collection requirements associated with the preservation of resident cap positions from closed hospitals, addressed in section IV.K.3. of the preamble of the proposed rule (83 FR 20439 through 20440) and this final rule, are not subject to the Paperwork Reduction Act, as stated in section 5506 of the Affordable Care Act.

### 3. ICRs for the Hospital Inpatient Quality Reporting (IQR) Program

#### a. Background

The Hospital IQR Program (formerly referred to as the Reporting Hospital Quality Data for Annual Payment (RHQDAPU) Program) was originally established to implement section 501(b) of the MMA, Pub. L. 108-173. The collection of information associated with the original starter set of quality measures was previously approved under OMB control number 0938-0918. All of the information collection requirements previously approved under OMB control number 0938-0918 have been combined with the information collection request currently approved under OMB control number 0938-1022. OMB has currently approved 3,637,282 hours of burden and approximately \$133 million under OMB control number 0938-1022, accounting for information collection burden experienced by 3,300 IPPS hospitals and 1,100 non-IPPS hospitals for the FY 2020 payment determination.<sup>411</sup> We no longer use OMB control number 0938-0918. Below, we describe the burden changes with regards to collection of information under OMB control number 0938-1022 for IPPS hospitals due to the finalized policies in this final rule.

In section VIII.A. of the preambles of the proposed rule (83 FR 20470 through 20500) and this final rule, we discuss the following finalized policies that we expect to affect our collection of information burden estimates: (1) eCQM reporting and submission requirements for the CY 2019 reporting period/FY 2021 payment

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<sup>411</sup> The information collection burden associated with submitting data for the HCP and HAI measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI) via the CDC's NHSN system is captured under a separate OMB control number, 0920-0666. The information collection burden associated with submitting data for the HCAHPS Survey measure is captured under OMB control number 0938-0981.

determination; (2) removal of three chart-abstracted measures beginning with the CY 2019 reporting period/FY 2021 payment determination; and (3) removal of six chart-abstracted measures beginning with the CY 2020 reporting period/FY 2022 payment determination. Details on these policies, as well as the expected burden changes, are discussed below.

This final rule also includes policies with respect to claims-based and other measures to: (1) remove 17 claims-based measures beginning with the CY 2018 reporting period/FY 2020 payment determination; (2) remove two claims-based measures beginning with the CY 2019 reporting period/FY 2021 payment determination; (3) remove one claims-based measure beginning with CY 2020 reporting period/FY 2022 payment determination; (4) remove one claims-based measure beginning with the CY 2021 reporting period/FY 2023 payment determination; (5) remove two structural measures beginning with the CY 2018 reporting period/FY 2020 payment determination; and (6) remove seven eCQMs beginning with the CY 2020 reporting period/FY 2022 payment determination. As discussed further below, we do not expect these policies to affect our information collection burden estimates.

b. Information Collection Burden Estimate for the Removal of Chart-Abstracted Measures

(1) Information Collection Burden Estimate for the Removal of Three Chart-Abstracted Measures Beginning with the CY 2019 Reporting Period/FY 2021 Payment Determination

In section VIII.A.5.b.(8)(b) of the preamble of this final rule, we discuss our finalized proposals to remove three chart-abstracted clinical process of care measures beginning with the CY 2019 reporting period/FY 2021 payment determination:

- Median Time from ED Arrival to ED Departure for Admitted ED Patients (ED-1) (NQF #0495);
- Influenza Immunization (IMM-2) (NQF #1659); and
- Incidence of Potentially Preventable Venous Thromboembolism (VTE-6).

We anticipate a reduction in information collection burden for all IPPS hospitals of 741,074 hours, or 225 hours per hospital, as a result of our finalized proposals to remove the ED-1 and IMM-2 chart-abstracted measures beginning with the CY 2019 reporting period/FY 2021 payment determination. This estimate was calculated by considering the previously approved information collection burden estimate for reporting the combined global population set (ED-1, ED-2, and IMM-2) of 1,599,074 hours, minus the estimated information collection reporting burden for only the ED-2 measure<sup>412</sup> ([15 minutes per record x 260 records per hospital per quarter x 4 quarters] / 60 minutes per hour x 3,300 IPPS hospital = 858,000 hours). Through these calculations (1,599,074

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<sup>412</sup> Estimated 15 minutes per case for reporting ED-2 measure based on average Clinical Data Abstraction Center abstraction times for 3Q 2016, 4Q 2016, and 1Q 2017 discharge data.

hours – 858,000 hours), we estimate a reduction of 741,074 hours, or 225 hours per hospital per year (741,074 hours / 3,300 hospitals) across all IPPS hospitals for the CY 2019 reporting period/FY 2021 payment determination because we are finalizing our proposals to remove the ED-1 and IMM-2 measures from the Hospital IQR Program.

We anticipate our finalized proposal to remove the VTE-6 measure will result in an information collection burden reduction of 304,997 hours for all IPPS hospitals, or 92 hours per hospital, for the CY 2019 reporting period/FY 2021 payment determination. We have previously estimated a reporting burden of 92 hours (7 minutes per record x 198 records per hospital per quarter x 4 quarters/ 60 minutes) per hospital per year, or 304,997 hours (92 hours per hospital x 3,300 hospitals) across all hospitals associated with abstracting and reporting VTE-6. Therefore, we estimate an information collection burden decrease of 304,997 hours for the CY 2019 reporting period/FY 2021 payment determination because we are finalizing our proposal to remove this measure from the Hospital IQR Program.

In summary, as a result of our finalized proposals in section VIII.A.5.b.(8) of the preamble of this final rule to remove IMM-2, ED-1, and VTE-6, we estimate an information collection burden reduction of 1,046,071 hours (-741,074 hours for ED-1 and IMM-2 removal + -304,997 hours for VTE-6 removal) and approximately \$38.3 million (1,046,071 hours x \$36.58 per hour<sup>413</sup>) across all 3,300 IPPS hospitals participating in the

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<sup>413</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

Hospital IQR Program for the CY 2019 reporting period/FY 2021 payment determination.

(2) Information Collection Burden Estimate for the Removal of Six Chart-Abstracted Measures Beginning with the CY 2020 Reporting Period/FY 2022 Payment Determination

In sections VIII.A.5.b.(2)(b) and VIII.A.5.b.(8)(b) of the preamble of this final rule, we are finalizing the removal of five chart-abstracted National Healthcare Safety Network (NHSN) hospital-acquired infection (HAI) measures<sup>414</sup> and one chart-abstracted clinical process of care measure beginning with the CY 2020 reporting period/FY 2022 payment determination:

- National Healthcare Safety Network Facility-Wide Inpatient Hospital-Onset *Clostridium difficile* Infection (CDI) Outcome Measure (NQF #1717);
- National Healthcare Safety Network Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (NQF #0138);
- National Healthcare Safety Network Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (NQF #0139);
- National Healthcare Safety Network Facility-Wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716);

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<sup>414</sup> As discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we proposed to remove the NHSN HAI measures beginning with the CY 2019 reporting period/FY 2021 payment determination, but are delaying their removal until the CY 2020 reporting period/FY 2022 payment determination.

- American College of Surgeons – Centers for Disease Control and Prevention Harmonized Procedure-Specific Surgical Site Infection (SSI) Outcome Measure (Colon and Abdominal Hysterectomy SSI) (NQF #0753); and
- Admit Decision Time to ED Departure Time for Admitted Patients Measure (ED-2) (NQF #0497).

We note that as discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we proposed to remove the NHSN HAI measures beginning with the CY 2019 reporting period/FY 2021 payment determination, but are finalizing a modified version of our proposal which delays their removal until the CY 2020 reporting period/FY 2022 payment determination. Our estimates below have been updated to reflect this change. Because the burden associated with submitting data for the NHSN HAI measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI) is captured under separate OMB control number 0920-0666, we do not provide an independent estimate of the information collection burden associated with these measures for the Hospital IQR Program. Because the NHSN HAI measures will be retained in the HAC Reduction and Hospital VBP Programs, we do not anticipate a reduction in data collection and reporting burden associated with the CDC NHSN's OMB control number 0920-0666. We note, however, that we anticipate a reduction in burden associated with the Hospital IQR Program validation activities we conduct for these NHSN HAI measures, as discussed further below.

We further anticipate removing the chart-abstracted ED-2 measure will reduce the reporting burden for all IPPS hospitals by a total of 858,000 hours, or 260 hours per

hospital. As discussed above, we estimate reporting the ED-2 measure takes approximately 260 hours (15 minutes per record x 260 records per hospital per quarter x 4 quarters / 60 minutes = 260 hours) per hospital per year, or 858,000 hours (260 hours x 3,300 hospitals) across all IPPS hospitals. Therefore, we estimate an 858,000 hour information collection burden decrease for the CY 2020 reporting period/FY 2022 payment determination because we are finalizing our proposal to remove this measure from the Hospital IQR Program.

In summary, because we are finalizing our proposal in section VIII.A.5.b.(8)(b) of the preamble of this final rule to remove ED-2, we estimate an information collection burden reduction of 858,000 hours and approximately \$31.4 million (858,000 hours x \$36.58 per hour<sup>415</sup>) across all 3,300 IPPS hospitals participating in the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination.

### (3) Information Collection Impacts on Data Validation Resulting from Chart-Abstracted Measure Removal

While we did not propose any changes to our validation requirements related to chart-abstracted measures, because we are finalizing our proposals with modification in section VIII.A.5.b.(2)(b)<sup>416</sup> and section VIII.A.5.b.(8) of the preamble of this final rule to remove five NHSN HAIs and four clinical process of care measures, we believe that hospitals will experience an overall reduction in information collection burden associated

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<sup>415</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

<sup>416</sup> As discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we proposed to remove the NHSN HAI measures beginning with the CY 2019 reporting period/FY 2021 payment determination, but are delaying their removal until the CY 2020 reporting period/FY 2022 payment determination.

with chart-abstracted measure validation beginning with the FY 2023 payment determination.

As noted in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49762 and 49763), we reimburse hospitals directly for expenses associated with submission of charts for clinical process of care measure data validation (we reimburse hospitals at 12 cents per photocopied page; for hospitals providing charts digitally via a rewritable disc, such as encrypted CD-ROMs, DVDs, or flash drives, we reimburse hospitals at a rate of 40 cents per disc); we do not believe any additional information collection burden is associated with submitting this information via web portal or PDF (79 FR 50346). Therefore, because we directly reimburse, we do not anticipate any net change in burden associated with the cost of submission of validation charts as a result of our finalized proposals to remove four clinical process of care measures. Hospitals will no longer be required to submit, or be reimbursed for submitting, these data to CMS.

Because we are finalizing our proposals to remove all of the NHSN HAI measures from the Hospital IQR Program and because hospitals selected for validation currently are required to submit validation templates for the NHSN HAI measures, we anticipate a reduction in information collection burden under the Hospital IQR Program associated with the NHSN HAI data validation effort. We note that the burden associated with data collection for the NHSN HAI measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI) is accounted for under the CDC NHSN OMB control number 0920-0666. Because the NHSN HAI measures will be retained in the HAC Reduction and Hospital VBP Programs, we do not anticipate a

change in data collection and reporting burden associated with this OMB control number due to our finalized proposals under the Hospital IQR Program.

The data validation activities, however, are conducted by CMS. Since the measures were adopted into the Hospital IQR Program, CMS has validated the data for purposes of the Hospital IQR Program. Therefore, this burden has been captured under the Hospital IQR Program's OMB control number 0938-1022. We have previously estimated a reporting burden of 80 hours (1,200 minutes per record x 1 record per hospital per quarter x 4 quarters / 60 minutes) per hospital selected for chart-abstracted measure validation per year to submit the CLABSI and CAUTI templates, and 64 hours (960 minutes per record x 1 record per hospital per quarter x 4 quarters / 60 minutes) per hospital selected for chart-abstracted measure validation per year to submit the MRSA and CDI templates. Therefore, we estimate a total validation burden decrease of 43,200 hours ([-80 hours per hospital to submit CLABSI and CAUTI templates + -64 hours per hospital to submit MRSA and CDI templates] x 300 hospitals selected for validation) and approximately \$1.6 million (43,200 hours x \$36.58 per hour<sup>417</sup>) for the FY 2023 payment determination because of the removal of these measures from the Hospital IQR Program beginning with the CY 2020 reporting period/FY 2022 payment determination and the secondary effects on validation. We note that the HAC Reduction Program is finalizing the proposal to begin validation of these NHSN HAI measures as discussed in section IV.J. of the preamble of this final rule.

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<sup>417</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

c. Information Collection Burden Estimate for Finalized Removal of Two Structural Measures

In sections VIII.A.5.a. and b.(1) of the preamble of this final rule, we are finalizing our proposals to remove two structural measures (Hospital Survey on Patient Safety Culture and Safe Surgery Checklist Use) beginning with the CY 2018 reporting period/FY 2020 payment determination. We anticipate removing these measures will result in a minimal information collection burden reduction for hospitals. Specifically, we do anticipate a very slight reduction in information collection burden associated with the finalized removal of the Safe Surgery Checklist measure because completion of this measure takes hospitals approximately 2 minutes each year (77 FR 53666). Similarly, we anticipate a very slight reduction in information collection burden associated with the finalized removal of the Patient Safety Checklist measure (80 FR 49762 through 49873). Consistent with previous years (80 FR 49762), we estimate a collection of information burden of 15 minutes per hospital to report all four previously finalized structural measures and to complete other forms (such as the Extraordinary Circumstances Exceptions Request Form). Therefore, our information collection burden estimate of 15 minutes per hospital remains unchanged because we believe the reduction in information collection burden associated with removing these two structural measures is sufficiently minimal that it will not substantially impact this estimate, and we want to retain a conservative estimate of the information collection burden associated with the use of our forms.

Comment: One commenter believed that the collection of information burden estimate for structural measures should take into account time hospitals spend on overall assurance that data are accurate, reported correctly, validated, and submitted.

Response: We appreciate the commenter's feedback. We note the burden estimate of 15 minutes per hospital is specific to the reporting of information for structural measures in the Hospital IQR Program, as opposed to the general work providers perform to address data collection and internal quality assurance. Further, we are finalizing our proposal to remove the two remaining structural measures from the Hospital IQR Program so that no structural measures will remain in the program, but we will take commenter's feedback into consideration should the Hospital IQR Program propose to adopt additional structural measures in the future. We refer readers to section I.K. of Appendix A of this final rule for a detailed discussion of the costs associated with the Hospital IQR Program, including costs that are not strictly information collection burden.

#### d. Burden Estimate for Removal of Claims-Based Measures

In section VIII.A.5.b.(2)(a), (3), (4), (6), and (7) of the preamble of this final rule, we are finalizing our proposals to remove the following 17 claims-based measures beginning with the CY 2018 reporting period/FY 2020 payment determination:

- Patient Safety and Adverse Events Composite Measure (PSI 90) (NQF #0531);
- Hospital 30-Day All-Cause Risk-Standardized Readmission Rate Following Acute Myocardial Infarction (AMI) Hospitalization (NQF #0505) (READM-30-AMI);

- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization (NQF #1891) (READM-30-COPD);
- Hospital 30-Day, All-Cause, Unplanned, Risk-Standardized Readmission Rate Following Coronary Artery Bypass Graft (CABG) Surgery (NQF #2515) (READM-30-CABG);
- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Heart Failure Hospitalization (NQF #0330) (READM-30-HF);
- Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate Following Pneumonia Hospitalization (NQF #0506) (READM-30-PN);
- 30-day Risk-Standardized Readmission Rate Following Stroke Hospitalization (READM-30-STK);
- Hospital-Level 30-Day, All-Cause Risk-Standardized Readmission Rate Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty (NQF #1551) (READM-30-THA/TKA);
- Hospital 30-day, All-Cause, Risk-Standardized Mortality Rate Following Acute Myocardial Infarction (AMI) Hospitalization for Patients 18 and Older (NQF #0230) (MORT-30-AMI);
- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Heart Failure Hospitalization (NQF #0229) (MORT-30-HF);
- Medicare Spending Per Beneficiary (MSPB) –Hospital (NQF #2158);
- Cellulitis Clinical Episode-Based Payment Measure (Cellulitis Payment);

- Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure (GI Payment);
- Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure (Kidney/UTI Payment);
- Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure (AA Payment);
- Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure (Chole and CDE Payment); and
- Spinal Fusion Clinical Episode-Based Payment Measure (SFusion Payment).

In addition, we are finalizing our proposals to remove two claims-based measures beginning with the CY 2019 reporting period/FY 2021 payment determination:

(1) Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization (NQF #1893); and (2) Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Pneumonia Hospitalization (NQF #0468). We are also finalizing our proposal to remove one claims-based measure, Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft (CABG) Surgery measure (NQF #2558), beginning with the CY 2020 reporting period/FY 2022 payment determination, and one claims-based measure, Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty, beginning with the CY 2021 reporting period/FY 2023 payment determination.

Because these claims-based measures are calculated using only data already reported to the Medicare program for payment purposes, we do not anticipate that removing these measures will affect information collection burden on hospitals. However, we refer readers to section VIII.A.5.b.(2)(a), (3), (4), (6) and (7) of the preamble of this final rule for a discussion of the reduction in costs associated with these measures unrelated to the information collection burden.

e. Information Collection Burden Estimate for Finalized Removal of eCQMs

In section VIII.A.5.b.(9) of the preamble of this final rule, we are finalizing our proposals to remove the following seven eCQMs from the eCQM measure set beginning with the CY 2020 reporting period/FY 2022 payment determination:

- Primary PCI Received within 90 Minutes of Hospital Arrival (AMI-8a);
- Home Management and Plan of Care Document Given to Patient/Caregiver (CAC-3);
- Median Time from ED Arrival to ED Departure for Admitted ED Patients (ED-1) (NQF #0495);<sup>418</sup>
- Hearing Screening Prior to Hospital Discharge (EHDI-1a) (NQF# 1354);
- Elective Delivery (PC-01) (NQF #0469);
- Stroke Education (STK-08); and
- Assessed for Rehabilitation (STK-10) (NQF #0441).

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<sup>418</sup> Median Time from ED Arrival to ED Departure for Admitted ED Patients (ED-1) is finalized for removal in both chart-abstracted and eCQM forms in sections VIII.A.5.b.(8)(b) and VIII.A.5.(b)(9)(c) of the preamble of this final rule, respectively.

Because these eCQMs being finalized for removal were among a set of 15 eCQMs available for reporting, we believe that reducing the number of eCQMs from which hospitals choose will enable hospitals to focus on and maintain a smaller subset of measures (8 instead of 15), but this will not have an effect on the burden of submitting information to CMS. Hospitals will still be required to submit 4 eCQMs of their choice from the eCQM measure set. While the information collection burden will not change, we refer readers to section VIII.A.4.b. of the preamble of this final rule where we acknowledge that costs are multi-faceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining Hospital IQR Program requirements.

f. Information Collection Burden Estimates for the Finalized Updates to the eCQM Reporting Requirements

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38355 through 38361), we finalized eCQM reporting requirements, such that hospitals submit one, self-selected calendar quarter of data for 4 eCQMs in the Hospital IQR Program measure set for the CY 2018 reporting period/FY 2020 payment determination. In section VIII.A.10.d.(2) of the preamble of this final rule, we are finalizing our proposal to require that hospitals continue to submit one, self-selected calendar quarter of data for 4 eCQMs in the Hospital IQR Program measure set for the CY 2019 reporting period/FY 2021 payment determination. Therefore, we believe there will be no change to the burden estimate because the previous burden estimate of 40 minutes per hospital per year (10 minutes per record x 4 eCQMs x 1 quarter) associated with eCQM reporting requirements finalized

for the CY 2018 reporting period/FY 2020 payment determination will continue to apply to the CY 2019 reporting period/FY 2021 payment determination.

g. Information Collection Burden Estimate for the Finalized Modifications to EHR Certification Requirements

In section VIII.A.10.d.(3) of the preamble of this final rule, we are finalizing our proposal to update the EHR certification requirements by requiring the use of EHR technology certified to the 2015 Edition beginning with the CY 2019 reporting period/FY 2021 payment determination, to align with the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) for eligible hospitals and CAHs. We do not expect this finalized proposal to affect our information collection burden estimates because this policy does not require hospitals to submit new data to CMS. With respect to any costs unrelated to data submission, we refer readers to section I.K. of Appendix A of this final rule.

h. Summary of Information Collection Burden Estimates for the Hospital IQR Program

In summary, under OMB control number 0938-1022, we estimate: (1) a total information collection burden reduction of 1,046,138 hours (-1,046,071 hours due to the removal of ED-1, IMM-2, and VTE-6 measures for the CY 2019 reporting period/FY 2021 payment determination and -67 hours for no longer collecting data for the voluntary Hybrid HWR measure<sup>419</sup>) and a total cost reduction related to information

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<sup>419</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38350 through 38355), we finalized our proposal to collect data on a voluntary basis for the Hybrid HWR measure for the CY 2018 reporting period/FY 2020 payment determination. We estimated that approximately 100 hospitals would voluntarily report data for

collection of approximately \$38.3 million (-1,046,138 hours x \$36.58 per hour<sup>420</sup>) for the CY 2019 reporting period/FY 2021 payment determination; (2) a total information collection burden reduction of 858,000 hours (-858,000 hours due to the removal of ED-2) and a total information collection cost reduction of approximately \$31.3 million (-858,000 hours x \$36.58 per hour<sup>421</sup>) for the CY 2020 reporting period/FY 2022 payment determination; and (3) a total information collection burden reduction of 43,200 hours (-43,200 hours due to no longer needing to validate NHSN HAI measures under the Hospital IQR Program) and a total information collection cost reduction of approximately \$1.6 million (-43,200 hours x \$36.58 per hour) for the CY 2021 reporting period/FY 2023 payment determination. These are the total information collection burden reduction estimates for which we are requesting OMB approval under OMB number 0938-1022.

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this measure, resulting in a total burden of 67 hours across all hospitals for the CY 2018 reporting period/FY 2020 payment determination (82 FR 38504). Because we only finalized voluntary collection of data for one year, voluntary collection of this data will no longer occur, beginning with the CY 2019 reporting period/FY 2021 payment determination and subsequent years, resulting in a reduction in burden of 67 hours across all hospitals.

<sup>420</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program.

Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

<sup>421</sup> Ibid.

**Hospital IQR Program CY 2019 Reporting Period/FY 2021 Payment Determination  
Information Collection Burden Estimates**

<b>Annual Recordkeeping and Reporting Requirements Under OMB Control Number 0938-1022 for CY 2019 Reporting Period/FY 2021 Payment Determination</b>								
<b>Activity</b>	<b>Estimated time per record (minutes)</b>	<b>Number reporting quarters per year</b>	<b>Number of IPPS hospitals reporting</b>	<b>Average number records per hospital per quarter</b>	<b>Annual burden (hours) per hospital</b>	<b>Newly finalized annual burden (hours) across IPPS hospitals</b>	<b>Previously finalized annual burden (hours) across IPPS hospitals</b>	<b>Net difference in annual burden hours</b>
Reporting on Emergency department throughput (ED-1) / Immunizations (IMM-2)	13	4	3,300	260	225	858,000	1,599,074	-741,074
Venous thromboembolism (VTE)	7	4	3,300	198	92	0	304,997	-304,997
Voluntary HWR Reporting <sup>422</sup>	10	4	100	1	0.67	0	67	-67
<b>Total Change in Information Collection Burden Hours: -1,046,138</b>								
<b>Total Cost Estimate: Updated Hourly Wage (\$36.58) x Change in Burden Hours (-1,046,138) = - \$38,267,728</b>								

**Hospital IQR Program CY 2020 Reporting Period/FY 2022 Payment Determination  
Information Collection Burden Estimates**

<b>Annual Recordkeeping and Reporting Requirements Under OMB Control Number 0938-1022 for CY 2020 Reporting Period/FY 2022 Payment Determination</b>	
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<sup>422</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38350 through 38355), we finalized our proposal to collect data on a voluntary basis for the Hybrid HWR measure for the CY 2018 reporting period/FY 2020 payment determination. We estimated that approximately 100 hospitals would voluntarily report data for this measure, resulting in a total burden of 67 hours across all hospitals for the CY 2018 reporting period/FY 2020 payment determination (82 FR 38504). Because we only finalized voluntary collection of data for one year, voluntary collection of this data will no longer occur beginning with the CY 2019 reporting period/FY 2021 payment determination and subsequent years resulting in a reduction in burden of 67 hours across all hospitals.

Activity	Estimated time per record (minutes)	Number reporting quarters per year	Number of IPPS hospitals reporting	Average number records per hospital per quarter	Annual burden (hours) per hospital	Newly finalized annual burden (hours) across IPPS hospitals	Previously finalized annual burden (hours) across IPPS hospitals	Net difference in annual burden hours
Reporting on Emergency department throughput (ED-2 only)	15	4	3,300	260	260	0	858,000	-858,000
<b>Total Change in Information Collection Burden Hours: - 858,000</b>								
<b>Total Cost Estimate: Updated Hourly Wage (\$36.58) x Change in Burden Hours (-858,000) = - \$31,385,640</b>								

**Hospital IQR Program CY 2021 Reporting Period/FY 2023 Payment Determination  
Information Collection Burden Estimates**

Annual Recordkeeping and Reporting Requirements Under OMB Control Number 0938-1022 for CY 2021 Reporting Period/FY 2023 Payment Determination								
Activity	Estimated time per record (minutes)	Number reporting quarters per year	Number of IPPS hospitals reporting	Average number records per hospital per quarter	Annual burden (hours) per hospital	Newly finalized annual burden (hours) across IPPS hospitals	Previously finalized annual burden (hours) across IPPS hospitals	Net difference in annual burden hours
HAI Validation Templates (CLABSI, CAUTI)	1,200	4	300	1	80	0	24,000	-24,000
HAI Validation Templates (MRSA, CDI)	960	4	300	1	64	0	19,200	-19,200
<b>Total Change in Information Collection Burden Hours: - 43,200</b>								
<b>Total Cost Estimate: Updated Hourly Wage (\$36.58) x Change in Burden Hours (-43,200) = - \$1,580,256</b>								

#### 4. ICRs for PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program

##### a. Background

As discussed in sections VIII.B. of the preambles of the proposed rule (83 FR 20500 through 20510) and this final rule, section 1866(k)(1) of the Act requires, for purposes of FY 2014 and each subsequent fiscal year, that a hospital described in section 1886(d)(1)(B)(v) of the Act (a PPS-exempt cancer hospital, or a PCH) submit data in accordance with section 1866(k)(2) of the Act with respect to such fiscal year. There is no financial impact to PCH Medicare payment if a PCH does not participate. Below we discuss only changes in burden that will result from the proposals that we are finalizing in this final rule.

##### b. Revision of Time Estimate for Structural and Web-Based Tool Measures for the FY 2021 Program Year and Subsequent Years

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20559), we proposed to revise our burden calculation methodology. With all the parameters considered when PCHs submit data on PCHQR Program measures (training of appropriate staff members on National Healthcare Safety Network (NHSN) reporting and the CMS Web Measures Tool for the reporting of the clinical process/oncology care measures; the time required for collection and aggregation of data; and the time required for reporting of the data by the PCH's representative), we strive to achieve continuity in how we calculate and analyze burden data. In prior years, we have based our burden estimates on the notion that all 11 PCHs would report on all measures for all cases (78 FR 50958). These assumptions were made in order to be as comprehensive as possible given a lack of

PCH-specific data available at the time. However, we believe it is more appropriate to use estimates developed using data available in other quality reporting programs wherever possible, because we believe these estimates will provide a more accurate estimate of burden associated with data collection and reporting. Our proposal to update the estimate the time required to collect and report data for structural measures and measures that use a web-based tool is discussed below.

We initially adopted five clinical process/cancer specific treatment measures that utilized a web-based tool for the FY 2016 program year in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50841 through 50844). In that rule, we did not specify burden estimates based on the measure type, but instead provided estimates “for submitting all quality measure data” (78 FR 50958). Since then, we have been able to better understand and differentiate the various levels of effort associated with data abstraction and submission for specific types of measures. Moreover, in understanding that certain measure types prove more burdensome than others (that is, chart-abstracted measures), we believe it is necessary to provide burden estimates that better reflect the type of measure being discussed.

Using historical data from its validation contractor, the Hospital IQR Program has previously estimated that it takes 15 minutes per hospital to report on four structural measures (80 FR 49762). We believe this estimate is appropriate for the PCHQR Program because data submission for measures that utilize a web-based tool is similar to the data submission for a structural measure, in that both types of measures use the same reporting mechanism, the QualityNet Secure Portal. In addition, we wish to account for

the time associated with data collection and aggregation for individual measures when considering burden, and believe 15 minutes per measure is an appropriately conservative estimate for the measures submitted via a web-based tool in the PCHQR Program.

Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20559), we proposed to apply this burden estimate to four measures that utilize a web-based tool: (1) Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389).

We invited public comment on our proposal to utilize a burden estimate of 15 minutes per measure, per PCH, with respect to the burden estimates we discuss below for the FY 2021 program year and subsequent years.

We did not receive any public comments on this proposal. We are therefore finalizing that we will use a burden estimate of 15 minutes per measure, per PCH, with respect to the burden estimates for web-based and/or structural measures for the FY 2021 program year and subsequent years.

c. Estimated Burden of PCHQR Program Proposals for the FY 2021 Program Year

In section VIII.B.3. of the preamble of this final rule, we are finalizing our proposal to remove six measures beginning with the FY 2021 program year— four web-based, structural measures: (1) Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified

(PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389), and two chart-abstracted, NHSN measures: (5) NHSN Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and (6) NHSN Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139). In addition, in section VIII.B.4.b. of the preamble of this final rule, we are finalizing our proposal to adopt one claims-based measure, 30-Day Unplanned Readmissions for Cancer Patients (NQF #3188), beginning with the FY 2021 program year. As a result of these finalized measure removals, the PCHQR Program measure set will consist of 13 measures for the FY 2021 program year.

(1) Removal of Web-Based Structural Measures

We estimate that the removal of four web-based, structural measures will reduce the burden associated with quality reporting on PCHs. We estimate a reduction of 1 hour (or 60 minutes) per PCH (15 minutes per measure x 4 measures = 60 minutes), and a total annual reduction of approximately 11 hours for all 11 PCHs (60 minutes x 11 PCHs / 60 minutes per hour), due to the finalized removal of these four measures.

(2) Maintenance of Chart-Abstracted NHSN Measures

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20503), we proposed to remove two NHSN measures, Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and (2) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139), from the PCHQR Program.

As discussed in section VIII.B.3.b.(2) of the preamble of this final rule, we are deferring finalization of our policies regarding future use of the Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139) in the PCHQR Program to a future 2018 final rule, most likely in the CY 2019 OPSS/ASC final rule targeted for release no later than November 2018. We will therefore address any change in burden associated with this policy decision, most likely, in the CY 2019 OPSS/ASC final rule.

We note that we have also reconciled the burden estimates associated with the remaining NHSN measures (CLABSI, CAUTI, CDI, HCP, MRSA and Colon and Abdominal Hysterectomy SSI) included in the PCHQR Program measure, which were previously accounted for under OMB Control Number 0938-1175. The burden associated with data collection for these measures is accounted for under the CDC NHSN OMB control number 0920-0666; for this reason, we have removed the duplicative burden estimate from the PCHQR Program's OMB Control Number, 0938-1175.

(3) Adoption of 30-Day Unplanned Readmissions for Cancer Patients Measure (NQF #3188)

We do not anticipate any increase in burden on PCHs related to our finalized proposal to adopt the claims-based 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188), beginning with the FY 2021 program year, because this measure is claims-based and does not require PCHs to submit any additional data.

In summary, we estimate a total reduction of 11 hours of burden per year for all 11 PCHs (-1 hours per PCH x 11 PCHs) associated with the removal of the four web-based, structural measures beginning with the FY 2021 program year. Coupled with our estimated salary costs, we estimate that these finalized changes will result in a reduction in annual labor costs of \$402 (11 hours x \$36.58 hourly labor cost<sup>423</sup>) across the 11 PCHs beginning with the FY 2021 PCHQR Program. The burden associated with these reporting requirements is currently approved under OMB control number 0938-1175. The information collection will be revised and submitted to OMB.

#### 5. ICRs for the Hospital Value-Based Purchasing (VBP) Program

In section IV.I. of the preambles of the proposed rule (83 FR 20407 through 20426) and this final rule, we discuss requirements for the Hospital VBP Program. Specifically, in this final rule, with respect to quality measures, we are finalizing our proposals to remove three claims-based measures (AMI Payment, HF Payment, and PN Payment) effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule. Because these claims-based measures are calculated using only data already reported to the Medicare program for payment purposes, we do not anticipate that removing these measures will increase or decrease the reporting burden on hospitals. However, we believe removal of these measures from the Hospital VBP Program will reduce other costs associated with the program, such as: (1) costs for health care providers and clinicians to track the confidential feedback preview reports and publicly reported

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<sup>423</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38504 through 38505), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

information on the measures in more than one program; (2) costs for CMS to analyze and publicly report the measures' data in multiple programs; and (3) confusion for beneficiaries to see public reporting on the same measures in different programs. As discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposal to remove a fourth claims-based measure - Patient Safety and Adverse Events (Composite) (PSI 90) (NQF #0531).

In addition, in this final rule, we are finalizing our proposal to remove one chart-abstracted measure (Elective Delivery (NQF #0469) (PC-01)) beginning with the FY 2021 program year. Because this chart-abstracted measure used data required for and collected under the Hospital IQR Program (OMB control number 0938-1022), there was no additional data collection burden associated with this measure under the Hospital VBP Program. Therefore, we do not anticipate removing this measure will increase or decrease the reporting burden on hospitals. However, we believe removal of this measure from the Hospital VBP Program will reduce other costs associated with the program, such as: (1) costs for health care providers and clinicians to track the confidential feedback preview reports and publicly reported information on the measures in more than one program; (2) costs for CMS to analyze, and publicly report the measures' data in multiple programs; and (3) confusion for beneficiaries to see public reporting on the same measures in different programs.

As discussed in section IV.I.2.c.(2) of the preamble of this final rule, we are not finalizing our proposal to remove five other chart-abstracted measures (CAUTI, CLABSI, Colon and Abdominal Hysterectomy SSI, MRSA Bacteremia, and CDI).

Because these chart-abstracted measures use data that will continue to be required for and collected under the Hospital IQR Program through the CY 2019 reporting period/FY 2021 payment determination, there is no change to the data collection burden associated with these measures under the Hospital VBP Program.

We note that we are finalizing our proposals to remove eight claims-based measures from the Hospital IQR Program, which have been finalized previously for, and will remain in, the Hospital VBP Program. However, we do not believe retaining these claims-based measures in the Hospital VBP Program will create any change in burden for hospitals because the measure data will continue to be collected using Medicare FFS claims hospitals are already submitting to the Medicare program for payment purposes.

#### 6. ICRs for the Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

In section VIII.C.5. of the preambles of the proposed rule (83 FR 20510 through 20515) and this final rule, we discuss our finalized policies to remove two measures from the LTCH QRP beginning with the FY 2020 LTCH QRP and to remove one measure from the LTCH QRP beginning with the FY 2021 LTCH QRP.

In section VIII.C.5.a. and b. of the preamble of this final rule, we are finalizing our proposals to remove two CDC NHSN measures: National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) and National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure beginning with the FY 2020 LTCH QRP. LTCHs will no longer be required to submit data on these measures beginning with October 1, 2018 admissions

and discharges. As a result, the burden and cost specifically for LTCHs for complying with the requirements of the LTCH QRP will be reduced. While the overall burden estimates are accounted for under OMB control number (0920–0666), to specifically account for burden reductions, the CDC provided more detailed estimates for LTCH reporting on the data for the measures we are finalizing for removal.

Based on estimates provided by the CDC, which is based on the frequency of actual reporting on such data, we estimate that the removal of the National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant *Staphylococcus aureus* (MRSA) Bacteremia Outcome Measure (NQF #1716) will result in a 3-hour (15 minutes per MRSA submission  $\times$  12 estimated submissions per LTCH per year) reduction in clinical staff time annually to report data, which equates to a decrease of 1,260 hours (3 hours burden per LTCH per year  $\times$  420 total LTCHs) in burden for all LTCHs. Given 10 minutes of registered nurse time at \$69.40 per hour, and 5 minutes of medical records or health information technician time at \$39.86 per hour, for the submission of MRSA data to the NHSN per LTCH per year, we estimate that the total cost of complying with the requirements of the LTCH QRP will be reduced by \$178.66 per LTCH annually, or \$75,037.20 for all LTCHs annually.

Applying the same approach on burden reduction estimations, we estimate that the removal of the National Healthcare Safety Network (NHSN) Ventilator-Associated Event (VAE) Outcome Measure from the LTCH QRP will result in a 4.4 hour (22 minutes per VAE submission  $\times$  12 estimated submissions per LTCH per year) reduction in clinical staff time to report data, which equates to a decrease of 1,848 hours

(4.4 hours burden per LTCH per year  $\times$  420 total LTCHs) in burden for all LTCHs.

Given the registered nurse hourly rate of \$69.40 per hour, and medical records or health information technician rate of \$39.86 per hour for the submission of VAE data to the NHSN per LTCH per year, we estimate that the total cost of complying with the LTCH QRP will be reduced by \$293.54 per LTCH annually, or \$123,288.48 for all LTCHs annually.

In addition, in section VIII.C.5.c. of the preamble of this final rule, we are finalizing our proposal to remove the measure, Percent of Residents or Patients Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccine (Short Stay) (NQF #0680), beginning with the FY 2021 LTCH QRP. LTCHs will no longer be required to submit data on this measure beginning with October 1, 2018 admissions and discharges. As a result, the estimated burden and cost for LTCHs for complying with requirements of the LTCH QRP will be reduced. Specifically, we believe that there will be a 1.8 minute reduction in clinical staff time to report data per patient stay. We estimate 136,476 discharges from 420 LTCHs annually. This equates to a decrease of 4,094 hours in burden for all LTCHs (0.03 hours per assessment  $\times$  136,476 discharges). Given 1.8 minutes of registered nurse time at \$69.40 per hour completing an average of 325 sets of LTCH CARE Data Set assessments per LTCH per year, we estimate that the total cost will be reduced by \$676.53 per LTCH annually, or \$284,143.03 for all LTCHs annually. This decrease in burden will be accounted for in the information collection under OMB control number 0938-1163.

Overall, the cost associated with the finalized changes to the LTCH QRP is estimated at a reduction of \$1,148.73 per LTCH annually or \$482,468.71 for all LTCHs.

#### 7. ICRs Relating to the Hospital-Acquired Condition (HAC) Reduction Program

In section IV.J. of the preambles of the proposed rule (83 FR 20426 through 20437) and this rule, we discuss requirements for the HAC Reduction Program. In the proposed rule, we did not propose to adopt any new measures into the HAC Reduction Program. In this final rule, the Hospital IQR Program is finalizing its proposal to remove the claims-based Patient Safety and Adverse Events Composite (PSI 90) measure effective with the effective date of the FY 2019 IPPS/LTCH PPS final rule and finalizing with modification, its proposal five NHSN HAI measures (CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI), with the removal of these measures beginning with the CY 2020 reporting period/FY 2022 payment determination. These measures had been previously adopted for, and will remain in, the HAC Reduction Program.

We do not believe that retaining the claims-based PSI 90 measure in the HAC Reduction Program will create or reduce any burden for hospitals because it will continue to be collected using Medicare FFS claims hospitals are already submitting to the Medicare program for payment purposes.

We note the burden associated with collecting and submitting data for the HAI measures (CDI, CAUTI, CLABSI, MRSA, and Colon and Abdominal Hysterectomy SSI) via the NHSN system is captured under a separate OMB control number, 0920-0666, and therefore will not impact our burden estimates.

We anticipate the finalized discontinuation of the HAI measure validation process under the Hospital IQR Program will result in a net burden decrease to the Hospital IQR Program, but will result in an off-setting net burden increase to the HAC Reduction Program because hospitals selected for validation will continue to be required to submit validation templates for the HAI measures. Therefore, because of our finalized proposals in sections VIII.A.5.b.(2)(b) and IV.J.4.e. of the preamble of this final rule to remove the HAI chart-abstracted measures from the Hospital IQR Program, data validation for the measures will transfer to the HAC Reduction Program, and this is will result in a net neutral shift of 43,200 hours and approximately \$1.6 million from the Hospital IQR Program to the HAC Reduction Program, with no overall net change in burden.

Under the Hospital IQR Program, we have previously estimated a reporting burden of 80 hours (1,200 minutes per record x 1 record per hospital per quarter x 4 quarters / 60 minutes) per hospital selected for validation per year to submit the CLABSI and CAUTI templates, and 64 hours (960 minutes per record x 1 record per hospital per quarter x 4 quarters / 60 minutes) per hospital selected for validation per year to submit the MRSA and CDI templates. Therefore, we estimate a total burden shift of 43,200 hours ([80 hours per hospital to submit CLABSI and CAUTI templates + 64 hours per hospital to submit MRSA and CDI templates] x 300 hospitals selected for validation) and approximately \$1.6 million (43,200 hours x \$36.58 per hour<sup>424</sup>) as a result of our

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<sup>424</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

finalized proposals to discontinue HAI validation under the Hospital IQR Program and begin a validation process under the HAC Reduction Program.

#### 8. ICRs Relating to the Hospital Readmissions Reduction Program

In section IV.H. of the preamble of this final rule, we discuss our finalized proposals for the Hospital Readmissions Reduction Program. In this final rule, we did not adopt any new measures into the Hospital Readmissions Reduction Program.

However, we are finalizing our proposals to remove six claims-based measures from the Hospital IQR Program, which have been finalized previously for, and will remain in, the Hospital Readmissions Reduction Program. We do not believe that these claims-based measures remaining in the Hospital Readmissions Reduction Program will create any additional burden for hospitals because they will continue to be collected using Medicare FFS claims hospitals are already submitting to the Medicare program for payment purposes.

#### 9. ICRs for the Promoting Interoperability Programs

##### a. Background and Finalized Update to Hourly Wage Rate

In section VIII.D. of the preambles of the proposed rule (83 FR 20515 through 20544) and this final rule, we discuss our proposals and newly finalized policies for a new performance-based scoring methodology and changes to the Stage 3 objectives and measures for eligible hospitals and CAHs that attest to CMS for the Medicare Promoting Interoperability Program. We also discuss our proposal and final policy to change the EHR reporting period to a minimum of any continuous 90-day period in CYs 2019 and 2020 for all new and returning participants attesting to CMS or their State Medicaid

agency. In addition, we establish the CQM reporting period and criteria for CY 2019 and the removal of eight CQMs beginning in CY 2020. Lastly, we codify the policies for subsection (d) Puerto Rico hospitals who participate in the Medicare Promoting Interoperability Program for eligible hospitals, including policies previously implemented through program instruction. We did not propose to change the requirement for the 2015 Edition of CEHRT to be used beginning in CY 2019. In this final rule, we discuss and finalize our proposals with a few modifications regarding a new performance-based scoring methodology and changes to the Stage 3 objectives and measures for eligible hospitals and CAHs that attest to CMS under the Medicare Promoting Interoperability Program. We are finalizing the new measures Query of PDMP and Support Electronic Referral Loops by Receiving and Incorporating Health Information. We are finalizing the removal of the Coordination of Care Through Patient Engagement objective and its associated measures Secure Messaging, View, Download or Transmit, and Patient Generated Health Data as well as the measures Request/Accept Summary of Care, Clinical Information Reconciliation and Patient-Specific Education. We are renaming measures within the Health Information Exchange objective. These changes include changing the name from Send a Summary of Care, to Support Electronic Referral Loops by Sending Health Information; renaming the Public Health and Clinical Data Registry Reporting objective to Public Health and Clinical Data Exchange with the requirement to report on any two measures options; renaming the name the Patient Electronic Access to Health Information objective to Provider to Patient Exchange objective, and renaming the

remaining measure, Provide Patient Access measure to Provide Patients Electronic Access to Their Health Information measure.

In prior rules (81 FR 57260), we have estimated that the electronic reporting of CQM data could be accomplished by staff with a mean hourly wage of \$16.42 per hour.<sup>425</sup> Because this wage rate is based on Bureau of Labor Statistics (BLS) data dating to 2012, in the proposed rule (83 FR 20562), we proposed to update the wage rate to the most recent data available from the BLS, which is the 2016 wage rate of \$19.93.<sup>426</sup> We are calculating the cost of overhead, including fringe benefits, at 100 percent of the mean hourly wage. This is an estimated adjustment, since both fringe benefits and overhead costs vary significantly from employer-to-employer and the methods of estimating such costs vary widely from study-to-study. Nonetheless, we believe that doubling the hourly wage rate ( $\$19.44 \times 2 = \$39.86$ ) to estimate total cost is a reasonably accurate estimation method and allows for a conservative estimate of hourly costs. We refer readers to the Hospital IQR Program discussion in section XIV.B.3. the preamble of this final rule, for more information regarding the information collection burden related to reporting of CQMs.

We did not receive any public comments regarding this information collection. For the expected effects relating to the above proposals, we refer readers to section I.N. of Appendix A of this final rule.

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<sup>425</sup> Occupational Outlook Handbook. Available at: <http://www.bls.gov/oes/2012/may/oes292071.htm>.

<sup>426</sup> Occupational Outlook Handbook. Available at: <https://www.bls.gov/oes/current/oes292071.htm>.

b. Burden Estimates

In sections VIII.D.5. and 6. of the preamble of this final rule, we discuss our finalized policies for a new scoring methodology for eligible hospitals and CAHs that attest to CMS for the Promoting Interoperability Program, and the addition of one new opioid measure that is optional in 2019 and 2020. This scoring approach requires eligible hospitals and CAHs to report by attestation on only six measures. We consider this scoring methodology to be based more on performance and not solely on whether an eligible hospital or CAH meets the thresholds for measures. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20562 through 20564), we estimated that the new scoring methodology reduces the necessary response time by .25 hours. This is a reduction to the previous burden estimate provided in the 2015 EHR Incentive Programs final rule (80 FR 62928). In the proposed rule, we updated the burden estimate to take into account the reduced burden associated with the proposed new requirements for eligible hospitals and CAHs for Stage 3 of meaningful use.

We believe the burden will be different for eligible hospitals that attest to a State for purposes of receiving a Medicaid incentive payment because the existing Stage 3 requirements will continue to apply to them. We note that under section 101(b)(1) of the Medicare Access and CHIP Reauthorization Act of 2015 (Pub. L. 114-10), the Medicare EHR Incentive Program was sunset for EPs in 2018, and now many of these EPs are subject to the requirements of the Quality Payment Program (QPP). Currently the burden is estimated at \$388,408,189 annually. We estimate the burden for all participants in the Medicare and Medicaid Promoting Interoperability Programs represents a total cost of

\$61,113,527.80, which is a reduction of \$327,294,661 annually. We also note that the currently approved burden in hours are 4,230,155 and as a result of this finalized proposal we believe it will be reduced to 623,562.19 hours. This burden reduction will occur as a result of the reduced numbers of EPs and the new scoring methodology for eligible hospitals and CAHs proposed in the proposed rule. The burden estimate includes subsection (d) Puerto Rico hospitals. Below is the burden table where we take into account these changes and the burden that will ensue as a result of the changes. We note that the information collection request (OMB Control number 0938-1278) has been revised and submitted to OMB.

<b>Burden and Cost Estimates Associated with Information Collection</b>						
<b>Reg Section</b>	<b>Number of Respondents</b>	<b>Number of Responses</b>	<b>Burden per Response (hours)</b>	<b>Total Annual Burden (hours)</b>	<b>Hourly Labor Cost of Reporting (\$)</b>	<b>Total Cost (\$)</b>
§ 495.24(d) – Objectives/Measures (Medicaid EPs)	80,000	80,000	7.43	594,400	100	\$59,440,000
§ 495.24(d) – Objectives/Measures Medicaid (eligible hospitals/CAHs)	133	133	7.43	988.19	67.25	\$66,455.78
§ 495.24(e) – Objectives/Measures Medicare (eligible hospitals/CAHs)	3300	3300	7.18	23,694	67.25	\$1,593,421.50
§ 495.316 – Quarterly Reporting (Medicaid)	56	224	20	4,480	3.047	\$13,650.56
<b>Totals</b>	<b>83,489</b>	<b>83,489</b>		<b>623,562.19</b>		<b>\$61,113,527.80</b>

There are 3,300 eligible hospitals and CAHs that attest to CMS (Medicare-only and dual-eligible) under the Medicare Promoting Interoperability Program. Therefore, the total estimated annual cost burden for all eligible hospitals and CAHs in the Medicare

Promoting Interoperability Program to attest to meaningful use will be \$,1,593,421.5 (3,300 eligible hospitals and CAHs x 7 hours 18 minutes x \$67.25).<sup>427</sup>

In this final rule, we are finalizing our proposal that the new scoring methodology and changes to the Stage 3 objectives and measures for eligible hospitals and CAHs that attest to CMS will be optional for States to implement through changes to their State Medicaid HIT Plans approved by CMS for eligible hospitals participating in their Medicaid Promoting Interoperability Program. If States choose not to align, eligible hospitals in those States will continue to attest to the objectives and measures as currently specified under § 495.24(d). Extending this option to States will allow them flexibility to benefit from the improvements to meaningful use scoring outlined in this final rule, if they so choose. If States choose to take this option, we anticipate the same burden reduction for Medicaid eligible hospitals as discussed above, but a significant burden increase for States that choose to overhaul their systems to collect data. If States do not take the option, they will face no burden increase or decrease.

In section VIII.D.7. of the preamble of this final rule, we are finalizing our proposal that the EHR reporting periods in CYs 2019 and 2020 for new and returning participants attesting to CMS or their State Medicaid agency will be a minimum of any continuous 90-day period within each of the CYs 2019 and 2020. This means that EPs that attest to a State for the State's Medicaid Promoting Interoperability Program and eligible hospitals and CAHs attesting to CMS or the State's Medicaid Promoting Interoperability Program will attest to meaningful use of CEHRT for an EHR reporting

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<sup>427</sup> <https://www.bls.gov/oes/current/oes231011.htm>.

period of a minimum of any continuous 90-day period from January 1, 2019 through December 31, 2019 and from January 1, 2020 through December 31, 2020, respectively. The applicable incentive payment year and payment adjustment years for the EHR reporting periods in 2019 and 2020, as well as the deadlines for attestation and other related program requirements, will remain the same as established in prior rulemaking. We finalizing our proposals to make corresponding changes to the definition of “EHR reporting period” and “EHR reporting period for a payment adjustment year” at 42 CFR 495.4. We do not expect these finalized policies to affect our burden estimates because we have never required a different EHR reporting period.

In section VIII.D.9. of the preamble of this final rule, we are finalizing our proposal that the reporting period for Medicare and Medicaid eligible hospitals and CAHs that report CQMs electronically will be one, self-selected calendar quarter of CY 2019 data. We are also finalizing our proposal that eligible hospitals and CAHs participating in only the EHR Program, or participating in both the Promoting Interoperability Programs and the Hospital IQR Program, report on at least 4 self-selected CQMs. We are also finalizing our proposals to remove eight CQMs beginning in 2020. We believe to report on the 4 self-selected CQMs electronically will cost (\$39.86 x 40 min) 1,594.4 per hospital times 3,300 hospitals results in a total burden of \$5,261,520 for all eligible hospitals and CAHs.

In section VIII.D.10. of the preamble of this final rule, we are finalizing our proposals to incorporate into our regulations program guidance regarding subsection (d)

Puerto Rico hospitals. Because we did not propose any new requirements, we not believe that these proposals will affect burden.

In section VIII.D.12.a. of the preamble of this final rule, we are finalizing our proposals to amend 42 CFR 495.324(b)(2) and 495.324(b)(3) to align with current prior approval policy for MMIS and ADP systems at 45 CFR 95.611(a)(2)(ii), and (b)(2)(iii) and (iv), and to minimize burden on States. Specifically, we are finalizing our proposals that the prior approval dollar threshold in § 495.324(b)(3) be increased to \$500,000, and that a prior approval threshold of \$500,000 be added to § 495.324(b)(2). In addition, in light of these finalized changes, we are finalizing our proposal to make a conforming amendment to amend the threshold in § 495.324(d) for prior approval of justifications for sole source acquisitions to be the same \$500,000 threshold. That threshold is currently aligned with the \$100,000 threshold in current § 495.324(b)(3). Amending § 495.324(d) to preserve alignment with § 495.324(b)(3) will reduce burden on States and maintain the consistency of our prior approval requirements. We believe that this finalized proposal will reduce burden on States by raising the prior approval thresholds and generally aligning them with the thresholds for prior approval of MMIS and ADP acquisitions costs.

In section VIII.D.12.b. of the preamble of this final rule, we are finalizing our proposal that the 90 percent FFP for Medicaid Promoting Interoperability Program administration will no longer be available for most State expenditures incurred after September 30, 2022. We are finalizing a later sunset date, September 30, 2023, for the availability of 90 percent enhanced match for State administrative costs related to

Medicaid Promoting Interoperability Program audit and appeals activities, as well as costs related to administering incentive payment disbursements and recoupments that might result from those activities. States will not be able to claim any Medicaid Promoting Interoperability Program administrative match for expenditures incurred after September 30, 2023. We do not believe that these finalized proposals will impose any additional burdens on States, because they only affect the timing of State expenditures.

We did not receive any public comments specific to Medicaid information collection.

#### 10. ICRs for Revisions to the Supporting Documentation Requirements for Medicare Cost Reports

In section IX.B.1. of the preambles of the proposed rule (83 FR 20545) and this final rule, we discuss our proposal and finalized policy to incorporate the Provider Cost Reimbursement Questionnaire, Form CMS-339 (OMB No. 0938-0301) into the Organ Procurement Organization (OPO) and Histocompatibility Laboratory cost report, Form CMS-216 (OMB No. 0938-0102), which will complete our incorporation of the Form CMS-339 into all Medicare cost reports. We also discuss our finalized policy to update § 413.24(f)(5)(i) to reflect that an acceptable cost report would no longer require the provider to separately submit a Provider Cost Reimbursement Questionnaire, Form CMS-339, by removing the reference to the questionnaire.

There are 58 OPOs and 47 histocompatibility laboratories. This finalized proposal does not require additional data collection from OPOs or histocompatibility laboratories. This policy will benefit OPOs and histocompatibility laboratories because

they will no longer be required to complete and submit the Form CMS-339 as a separate form independent of the Medicare cost report in order to have an acceptable cost report submission under § 413.24(f)(5)(i).

Currently, all OPOs and histocompatibility laboratories are required to complete Form CMS-339. The finalized policy to incorporate the Provider Cost Reimbursement Questionnaire, Form CMS-339, into the OPO and Histocompatibility Laboratory cost report will eliminate the requirement to complete the Form CMS-339. The estimated annual burden associated with Form CMS-339 is 3 hours per respondent. The time required by an OPO or a histocompatibility laboratory to complete the Form CMS-339 is reduced because the form is incorporated into the cost report. The incorporation of the Form CMS-339 into the cost report as a cost report worksheet will decrease burden upon OPOs and histocompatibility laboratories. These entities will no longer be required to review multiple pages of questions not applicable to them. This finalized policy will result in an overall burden reduction to the 58 OPOs and 47 histocompatibility laboratories of a total of 289 hours.

Instead, these entities are required to respond to 5 questions, which we estimate will take 15 minutes per entity. The total estimated burden across all respondents is 26 hours ((105 respondents) x (0.25 hours/response)). By eliminating the requirement to complete the inapplicable parts of the Form CMS-339, each OPO or histocompatibility laboratory will experience a net burden decrease of 2.75 hours.

Based on the most recent Bureau of Labor Statistics (BLS) 2016 Occupational Outlook Handbook, the mean hourly wage for Category 43-3031 (bookkeeping,

accounting, and auditing clerk) is \$19.34. We added 100 percent of the mean hourly wage to account for fringe benefits and overhead, which calculates to a total hourly wage of \$38.68 ( $\$19.34 + \$19.34$ ). The overall decrease in costs to the 58 OPOs and 47 histocompatibility laboratories is \$11,178.52 ( $\$38.68 \times 289$  hours).

In section IX.B.6. of the preamble of this final rule, we discuss our final policy (with modifications to the proposal) in § 413.24(f)(5)(i)(E) that, effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization with the same fiscal year end, a cost report will be rejected for lack of supporting documentation if the home office or chain organization has not submitted, to the provider's contractor, a Home Office Cost Statement that corresponds to the amounts it has allocated to the provider's cost report. Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization with a different fiscal year end, a cost report will be rejected for lack of supporting documentation if the home office or chain organization has not submitted, to the provider's contractor, a Home Office Cost Statement that corresponds to some portion of the amounts it has allocated to the provider's cost report. When the provider and its home office have differing fiscal year ends, the provider's home office costs for a portion of the cost reporting period (as reflected on the Home Office Cost Statement) must correspond to a portion of the amount reported in the provider's cost report. When the provider and its home office have the same fiscal year end, the provider's home

office's cost for the same time period (as reflected on the Home Office Cost Statement) must correspond to the costs reported in the provider's cost report.

With our final policy, we anticipate that a home office with costs allocated to providers' cost reports within its chain organization will submit a Home Office Cost Statement to the providers' contractors in order for those providers in the chain organization to have an acceptable cost report submission. Based on the most recent available FY 2016 data in CMS' System for Tracking Audit and Reimbursement, there were approximately 94 providers that claimed costs on their cost reports that were allocated from approximately 13 home offices or chain organizations, but did not submit a Home Office Cost Statement with their cost reports to substantiate these allocated costs.

Because the existing burden estimate for a Home Office Cost Statement already reflects the requirement that a home office collect, maintain, and submit a list of the providers' contractors within its chain organization on the Home Office Cost Statement, the contractors to whom the Home Office Cost Statement should be sent is already known to the home office, and thus there is no additional burden placed upon home offices as a result of our finalized policy to require the home office or chain organization to submit to the providers' contractor the Home Office Cost Statement that corresponds to all or any portion of the costs it has allocated to the provider, in order for the providers within its chain organization to have an acceptable cost report submission. To account for the anticipated increase in Home Office Cost Statement submissions, we will adjust the number of respondents in the Home Office Cost Statement (OMB Control number

0938-0202) information collection request that is currently being developed for reinstatement.

#### 11. Summary of All Burden in This Final Rule

Below is a chart reflecting the total burden and associated costs for the provisions included in this final rule.

<b>Information Collection Requests</b>	<b>Burden Hours Increase/Decrease (-)*</b>	<b>Cost (+/-)*</b>
Application for GME Resident Slots	N/A	N/A
Changes--Medicare Cost Report	-289 hours	-\$10,907
Hospital Inpatient Quality Reporting Program	-1,947,338 hours	-\$71,233,624
Hospital Value-Based Purchasing Program <sup>1</sup>	N/A	N/A
HAC Reduction Program <sup>2</sup>	43,200 hours	\$1,580,256
Hospital Readmissions Reduction Program <sup>3</sup>	N/A	N/A
Promoting Interoperability Programs	-3,606,593 hours	-\$327,294,661
LTCH Quality Reporting Program	-7,202 hours	-\$482,468
PPS-Exempt Hospital Quality Reporting Program	-27,709 hours	-\$1,013,595
<b>TOTAL</b>	<b>-5,545,931 hours</b>	<b>\$-396,428,082</b>

\* Numbers rounded.

<sup>1</sup> Because the Hospital VBP Program uses quality measure collected under other programs or via Medicare fee-for-service claims hospitals are already submitting to CMS for payment purposes, the program does not anticipate any change in burden associated with finalizing removal of measures from the Program or retaining claims-based measures in the Hospital VBP Program that will be removed from the Hospital IQR Program.

<sup>2</sup> We note that the net costs reflected in the table for the HAC Reduction Program do not constitute a new information collection requirement on participating hospitals, but a transition of the NHSN HAI measure validation process from one program to another based on our efforts to reduce measure duplication across programs.

<sup>3</sup> Because the Hospital Readmissions Reduction Program measures are all collected via Medicare fee-for-service claims hospitals are already submitting to CMS for payment purposes, there is no unique information collection burden associated with the program.

**List of Subjects****42 CFR Part 412**

Administrative practice and procedure, Health facilities, Medicare, Puerto Rico, Reporting and recordkeeping requirements.

**42 CFR Part 413**

Health facilities, Kidney diseases, Medicare, Puerto Rico, Reporting and recordkeeping requirements.

**42 CFR Part 424**

Emergency medical services, Health facilities, Health professions, Medicare, Reporting and recordkeeping requirements.

**42 CFR Part 495**

Administrative practice and procedure, Electronic health records, Health facilities, Health professions, Health maintenance organizations (HMO), Medicaid, Medicare, Penalties, Privacy, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble of this final rule, the Centers for Medicare and Medicaid Services is amending 42 CFR Chapter IV as set forth below:

**PART 412--PROSPECTIVE PAYMENT SYSTEMS FOR INPATIENT  
HOSPITAL SERVICES**

1. The authority citation for part 412 is revised to read as follows:

**Authority:** Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh); secs. 123 and 124 of subtitle A of Title I of Pub. L. 106-113 (113 Stat. 1501A-332); sec. 307 of Subtitle A of Title III of Pub. L. 106-554; sec. 114 of 110-173;

sec. 4302 of Pub. L. 111-5; secs. 3106 and 10312 of Pub. L. 111-148; sec. 1206 of Pub. L. 113-67; sec. 112 of Pub. L. 113-93; sec. 231 of Pub. L. 114-113; secs. 15004, 15006, 15007, 15008, 15009, and 15010 of Pub. L. 114-255; and sec. 51005 of Division E of Title X of Pub. L. 115-123.

2. Section 412.3 is amended by revising paragraph (a) to read as follows:

**§ 412.3 Admissions.**

(a) For purposes of payment under Medicare Part A, an individual is considered an inpatient of a hospital, including a critical access hospital, if formally admitted as an inpatient pursuant to an order for inpatient admission by a physician or other qualified practitioner in accordance with this section and §§ 482.24(c), 482.12(c), and 485.638(a)(4)(iii) of this chapter for a critical access hospital. In addition, inpatient rehabilitation facilities also must adhere to the admission requirements specified in § 412.622.

\* \* \* \* \*

3. Section 412.4 is amended by adding paragraph (c)(4) to read as follows:

**§ 412.4 Discharges and transfers.**

\* \* \* \* \*

(c) \* \* \*

(4) For discharges occurring on or after October 1, 2018, to hospice care provided by a hospice program.

\* \* \* \* \*

4. Section 412.22 is amended by adding paragraph (h)(2)(iii)(A)(4) to read as follows:

**§ 412.22 Excluded hospitals and hospital units: General rules.**

\* \* \* \* \*

(h) \* \* \*

(2) \* \* \*

(iii) \* \* \*

(A) \* \* \*

(4) On or after October 1, 2018, a satellite facility that is part of a hospital excluded from the prospective payment systems specified in § 412.1(a)(1) that provides inpatient services in a building also used by another hospital that is excluded from the prospective payment systems specified in § 412.1(a)(1), or in one or more entire buildings located on the same campus as buildings used by another hospital that is excluded from the prospective payment systems specified in § 412.1(a)(1), is not required to meet the criteria specified in paragraphs (h)(2)(iii)(A)(1) through (3) of this section in order to be excluded from the inpatient prospective payment system. A satellite facility that is part of a hospital excluded from the prospective payment systems specified in § 412.1(a)(1) which is located in a building also used by another hospital that is not excluded from the prospective payment systems specified in § 412.1(a)(1), or in one or more entire buildings located on the same campus as buildings used by another hospital that is not excluded from the prospective payment systems specified in § 412.1(a)(1), is required to meet the criteria specified in paragraphs (h)(2)(iii)(A)(1) through (3) of this

section in order to be excluded from the prospective payment systems specified in § 412.1(a)(1).

\* \* \* \* \*

5. Section 412.23 is amended by revising paragraph (e)(3)(i) and adding paragraph (e)(3)(vii) to read as follows:

**§ 412.23 Excluded hospitals: Classifications**

\* \* \* \* \*

(e) \* \* \*

(3) Calculation of average length of stay. (i) Subject to the provisions of paragraphs (e)(3)(ii) through (vii) of this section, the average Medicare inpatient length of stay specified under paragraph (e)(2)(i) of this section is calculated by dividing the total number of covered and noncovered days of stay of Medicare inpatients (less leave or pass days) by the number of total Medicare discharges for the hospital's most recent complete cost reporting period. Subject to the provisions of paragraphs (e)(3)(ii) through (vii) of this section, the average inpatient length of stay specified under paragraph (e)(2)(ii) of this section is calculated by dividing the total number of days for all patients, including both Medicare and non-Medicare inpatients (less leave or pass days) by the number of total discharges for the hospital's most recent complete cost reporting period.

\* \* \* \* \*

(vii) For cost reporting periods beginning on or after October 1, 2019, the Medicare inpatient days and discharges that are associated with patients discharged from

a unit of the hospital will not be included in the calculation of the Medicare inpatient average length of stay specified under paragraph (e)(2)(i) of this section.

\* \* \* \* \*

6. Section 412.25 is amended by—

- a. Revising paragraphs (a)(1)(ii) and (iii), (d), and (e)(2)(iii)(A); and
- b. Adding paragraph (e)(2)(iv).

The revisions and addition read as follows:

**§ 412.25 Excluded hospital units: Common requirements.**

(a) \* \* \*

(1) \* \* \*

(ii) Prior to October 1, 2019, is not excluded in its entirety from the prospective payment systems; and

(iii) Unless it is a unit in a critical access hospital, the hospital of which an IRF is a unit must have at least 10 staffed and maintained hospital beds that are paid under the applicable payment system under which the hospital is paid, or at least 1 staffed and maintained hospital bed for every 10 certified inpatient rehabilitation facility beds, whichever number is greater. Otherwise, the IRF will be classified as an IRF hospital, rather than an IRF unit. In the case of an inpatient psychiatric facility unit, the hospital must have enough beds that are paid under the applicable payment system under which the hospital is paid to permit the provision of adequate cost information, as required by § 413.24(c) of this chapter.

\* \* \* \* \*

(d) Number of excluded units. Each hospital may have only one unit of each type (psychiatric or rehabilitation) excluded from the prospective payment systems specified in § 412.1(a)(1). A hospital excluded from the prospective payment systems as specified in § 412.1(a)(1) may not have an excluded unit (psychiatric or rehabilitation) that is excluded on the same basis as the hospital.

(e) \* \* \*

(2) \* \* \*

(iii) \* \* \*

(A) Except as provided in paragraph (e)(2)(iv) of this section, it is not under the control of the governing body or chief executive officer of the hospital in which it is located, and it furnishes inpatient care through the use of medical personnel who are not under the control of the medical staff or chief medical officer of the hospital in which it is located.

\* \* \* \* \*

(iv) Effective for cost reporting periods beginning on or after October 1, 2019, the requirements of paragraph (e)(2)(iii)(A) of this section do not apply to a satellite facility of a unit that is part of a hospital excluded from the prospective payment systems specified in § 412.1(a)(1) that does not furnish services in a building also used by another hospital that is not excluded from the prospective payment systems specified in § 412.1(a)(1), or in one or more entire buildings located on the same campus as buildings used by another hospital that is not excluded from the prospective payment systems specified in § 412.1(a)(1).

\* \* \* \* \*

7. Section 412.64 is amended by revising paragraphs (d)(1)(vii) and (d)(3) to read as follows:

**§ 412.64 Federal rates for inpatient operating costs for Federal fiscal year 2005 and subsequent fiscal years.**

\* \* \* \* \*

(d) \* \* \*

(1) \* \* \*

(vii) For fiscal years 2017, 2018, and 2019, the percentage increase in the market basket index (as defined in § 413.40(a)(3) of this chapter) for prospective payment hospitals, subject to the provisions of paragraphs (d)(2) and (3) of this section, less a multifactor productivity adjustment (as determined by CMS) and less 0.75 percentage point.

\* \* \* \* \*

(3)(i) Beginning fiscal year 2015, in the case of a “subsection (d) hospital,” as defined under section 1886(d)(1)(B) of the Act, that is not a meaningful electronic health record (EHR) user as defined in part 495 of this chapter for the applicable EHR reporting period and does not receive an exception, three-fourths of the percentage increase in the market basket index (as defined in § 413.40(a)(3) of this chapter) for prospective payment hospitals is reduced—

(A) For fiscal year 2015, by 33 1/3 percent;

(B) For fiscal year 2016, by 66 2/3 percent; and

(C) For fiscal year 2017 and subsequent fiscal years, by 100 percent.

(ii) Beginning fiscal year 2022, in the case of a “subsection (d) Puerto Rico hospital,” as defined under section 1886(d)(9)(A) of the Act, that is not a meaningful EHR user as defined in part 495 of this chapter for the applicable EHR reporting period and does not receive an exception, three-fourths of the percentage increase in the market basket index (as defined in § 413.40(a)(3) of this chapter) for prospective payment hospitals is reduced—

(A) For fiscal year 2022, by 33 1/3 percent;

(B) For fiscal year 2023, by 66 2/3 percent; and

(C) For fiscal year 2024 and subsequent fiscal years, by 100 percent.

\* \* \* \* \*

8. Section 412.90 is amended by revising paragraph (j) to read as follows:

**§ 412.90 General rules.**

\* \* \* \* \*

(j) Medicare-dependent, small rural hospitals. For cost reporting periods beginning on or after April 1, 1990, and before October 1, 1994, and for discharges occurring on or after October 1, 1997 and before October 1, 2022, CMS adjusts the prospective payment rates for inpatient operating costs determined under subparts D and E of this part if a hospital is classified as a Medicare-dependent, small rural hospital.

\* \* \* \* \*

**§ 412.92 [Amended]**

9. Section 412.92 is amended—

- a. In paragraph (a)(1)(ii) by removing the term “intermediary” and adding the term “MAC” in its place;
- b. By adding paragraph (a)(4);
- c. In paragraph (b)(1)(i) by removing the term “fiscal intermediary” and adding the term “MAC” in its place;
- d. In paragraphs (b)(1)(iii)(B) and (b)(1)(iv) by removing the term “intermediary” and adding the term “MAC” in its place;
- e. In paragraph (b)(1)(v) by removing the term “intermediary’s” and adding the term “MAC’s” in its place, and removing the term “intermediary” and adding the term “MAC” in its place;
- f. By revising paragraphs (b)(2)(i) and (ii) introductory text and (b)(2)(ii)(B);
- g. By adding paragraph (b)(2)(ii)(C);
- h. By revising paragraph (b)(2)(iv);
- i. In paragraphs (b)(3)(i), (ii) and (iii) by removing the term “fiscal intermediary” and adding the term “MAC” in its place;
- j. In paragraph (b)(3)(iv) by removing the phrase “fiscal intermediary or”;
- k. In paragraph (d)(2) introductory text and (e)(1) and (3) by removing the term “intermediary” wherever it appears and adding the term “MAC” in its place;
- l. In paragraph (e)(2) introductory text by removing the term “intermediary’s” and adding the term “MAC’s” in its place;
- m. In paragraph (e)(2)(i) by removing the term “intermediary” and adding the term “MAC” in its place; and

n. In paragraphs (e)(3)(i), (ii), and (iii) by removing the term “intermediary” and adding the term “MAC” in its place.

The revisions and addition read as follows:

**§ 412.92 Special treatment: sole community hospitals.**

(a) \* \* \*

(4) For a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the inpatient hospital prospective payment system and that meets the provider-based criteria at § 413.65 of this chapter as a main campus and a remote location of a hospital, combined data from the main campus and its remote location(s) are required to demonstrate that the criteria specified in paragraphs (a)(1)(i) and (ii) of this section are met. For the mileage and rural location criteria in paragraph (a) of this section and the mileage, accessibility, and travel time criteria specified in paragraphs (a)(1) through (3) of this section, the hospital must demonstrate that the main campus and its remote location(s) each independently satisfy those requirements.

(b) \* \* \*

(2) \* \* \*

(i) For applications received on or before September 30, 2018, sole community hospital status is effective 30 days after the date of CMS’ written notification of approval, except as provided in paragraph (b)(2)(v) of this section. For applications received on or after October 1, 2018, sole community hospital status is effective as of the date the MAC

receives the complete application, except as provided in paragraph (b)(2)(v) of this section.

(ii) When a court order or a determination by the Provider Reimbursement Review Board (PRRB) reverses a CMS denial of sole community hospital status and no further appeal is made, the sole community hospital status is effective as follows:

\* \* \* \* \*

(B) If the hospital’s application for sole community hospital status was received on or after October 1, 1983 and on or before September 30, 2018, the effective date is 30 days after the date of CMS’ original written notification of denial.

(C) If the hospital’s application for sole community hospital status was received on or after October 1, 2018, the effective date is the date the MAC receives the complete application.

\* \* \* \* \*

(iv) For applications received on or before September 30, 2018, a hospital classified as a sole community hospital receives a payment adjustment, as described in paragraph (d) of this section, effective with discharges occurring on or after 30 days after the date of CMS’ approval of the classification. For applications received on or after October 1, 2018, a hospital classified as a sole community hospital receives a payment adjustment, as described in paragraph (d) of this section, effective with discharges occurring on or after the date the MAC receives the complete application.

\* \* \* \* \*

10. Section 412.96 is amended by redesignating paragraph (d) as paragraph (e) and adding a new paragraph (d) to read as follows:

**§ 412.96 Special treatment: Referral centers.**

\* \* \* \* \*

(d) Criteria for hospitals that have remote location(s). For a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the inpatient hospital prospective payment system and that meets the provider-based criteria at § 413.65 of this chapter as a main campus and a remote location of a hospital, combined data from the main campus and its remote location(s) are required to demonstrate that the criteria specified in paragraphs (b)(1) and (2) and (c)(1) through (5) of this section are met. For the rural location criteria specified in paragraphs (b)(1) and (c) of this section and the mileage criteria specified in paragraphs (b)(2)(ii) and (c)(4) of this section, the hospital must demonstrate that the main campus and its remote locations each independently satisfy those requirements.

\* \* \* \* \*

11. Section 412.101 is amended by—

- a. Revising paragraph (b)(2);
- b. Revising paragraphs (c)(1) and (2) introductory text;
- c. Adding paragraph (c)(3); and
- d. Revising paragraph (d).

The revisions and addition read as follows:

**§ 412.101 Special treatment: Inpatient hospital payment adjustment for low-volume hospitals.**

\* \* \* \* \*

(b) \* \* \*

(2) In order to qualify for this adjustment, a hospital must meet the following criteria, subject to the provisions of paragraph (e) of this section:

(i) For FY 2005 through FY 2010 and FY 2023 and subsequent fiscal years, a hospital must have fewer than 200 total discharges, which includes Medicare and non-Medicare discharges, during the fiscal year, based on the hospital’s most recently submitted cost report, and be located more than 25 road miles (as defined in paragraph (a) of this section) from the nearest “subsection (d)” (section 1886(d) of the Act) hospital.

(ii) For FY 2011 through FY 2018, a hospital must have fewer than 1,600 Medicare discharges, as defined in paragraph (a) of this section, during the fiscal year, based on the hospital’s Medicare discharges from the most recently available MedPAR data as determined by CMS, and be located more than 15 road miles, as defined in paragraph (a) of this section, from the nearest “subsection (d)” (section 1886(d) of the Act) hospital.

(iii) For FY 2019 through FY 2022, a hospital must have fewer than 3,800 total discharges, which includes Medicare and non-Medicare discharges, during the fiscal year, based on the hospital’s most recently submitted cost report, and be located more than 15 road miles (as defined in paragraph (a) of this section) from the nearest “subsection (d)” (section 1886(d) of the Act) hospital.

\* \* \* \* \*

(c) \* \* \*

(1) For FY 2005 through FY 2010 and FY 2023 and subsequent fiscal years, the adjustment is an additional 25 percent for each Medicare discharge.

(2) For FY 2011 through FY 2018, the adjustment is as follows:

\* \* \* \* \*

(3) For FY 2019 through FY 2022, the adjustment is as follows:

(i) For low-volume hospitals with 500 or fewer total discharges, which includes Medicare and non-Medicare discharges, during the fiscal year, based on the hospital’s most recently submitted cost report, the adjustment is an additional 25 percent for each Medicare discharge.

(ii) For low-volume hospitals with more than 500 and fewer than 3,800 total discharges, which includes Medicare and non-Medicare discharges, during the fiscal year, based on the hospital’s most recently submitted cost report, the adjustment for each Medicare discharge is an additional percent calculated using the formula  $[(95/330) - (\text{number of total discharges}/13,200)]$ . “Total discharges” is determined as described in paragraph (b)(2)(iii) of this section.

(d) Eligibility of new hospitals for the adjustment. For FYs 2005 through 2010 and FY 2019 and subsequent fiscal years, a new hospital will be eligible for a low-volume adjustment under this section once it has submitted a cost report for a cost reporting period that indicates that it meets discharge requirements during the applicable fiscal year and has provided its Medicare administrative contractor with sufficient

evidence that it meets the distance requirement, as specified in paragraph (b)(2) of this section.

\* \* \* \* \*

12. Section 412.103 is amended by adding paragraph (a)(7) and revising paragraph (b)(6) to read as follows:

**§ 412.103 Special treatment: Hospitals located in urban areas and that apply for reclassification as rural.**

(a) \* \* \*

(7) For a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the inpatient hospital prospective payment system and that meets the provider-based criteria at § 413.65 of this chapter as a main campus and a remote location of a hospital, the hospital is required to demonstrate that the main campus and its remote location(s) each independently satisfy the location conditions specified in paragraphs (a)(1) and (2) of this section.

(b) \* \* \*

(6) Lock-in date for the wage index calculation and budget neutrality. In order for a hospital to be treated as rural in the wage index and budget neutrality calculations under § 412.64(e)(1)(ii), (e)(2) and (4), and (h) for the payment rates for the next Federal fiscal year, the hospital's application must be approved by the CMS Regional Office in accordance with the requirements of this section no later than 60 days after the public

display date at the Office of the Federal Register of the inpatient prospective payment system proposed rule for the next Federal fiscal year.

\* \* \* \* \*

**§ 412.105 [Amended]**

13. Section 412.105 is amended in paragraph (f)(1)(vii) by removing the reference “§§ 413.79(e)(1) through (e)(4)” and adding in its place the reference “§ 413.79(e)”.

14. Section 412.106 is amended by adding paragraph (g)(1)(iii)(C)(5) to read as follows:

**§ 412.106 Special treatment: Hospitals that serve a disproportionate share of low-income patients.**

\* \* \* \* \*

(g) \* \* \*

(1) \* \* \*

(iii) \* \* \*

(C) \* \* \*

(5) For fiscal year 2019, CMS will base its estimates of the amount of hospital uncompensated care on utilization data for Medicaid and Medicare SSI patients, as determined by CMS in accordance with paragraphs (b)(2)(i) and (4) of this section, using data on Medicaid utilization from 2013 cost reports from the most recent HCRIS database extract and the most recent available year of data on Medicare SSI utilization (or, for Puerto Rico hospitals, a proxy for Medicare SSI utilization data), and for

hospitals other than Puerto Rico hospitals, IHS or Tribal hospitals, and all-inclusive rate providers, data on uncompensated care costs, defined as charity care costs plus non-Medicare and nonreimbursable Medicare bad debt costs from 2014 and 2015 cost reports from the most recent HCRIS database extract.

\* \* \* \* \*

**§ 412.108 [Amended]**

15. Section 412.108 is amended—

a. By revising paragraph (a)(1);

b. By adding paragraph (a)(3);

c. By revising paragraph (b)(4) introductory text;

d. In paragraphs (b)(1) and (3), and (b)(4)(i), (ii), and (iii), (b)(5), (6), (7), (8), and (9), and (d)(1), (d)(2)(i), (d)(3) introductory text, and (d)(3)(i), (ii), and (iii) by removing the terms “fiscal intermediary” and “intermediary” wherever they appear and adding the term “MAC” in their place;

e. In paragraph (b)(8) and (9) and (d)(2) introductory text by removing the terms “fiscal intermediary’s” and “intermediary’s” and adding the term “MAC’s” in their place; and

f. By revising paragraph (c)(2)(iii) introductory text.

The revisions and additions read as follows:

**§412.108 Special treatment: Medicare-dependent, small rural hospitals.**

(a) \* \* \*

(1) General considerations. For cost reporting periods beginning on or after April 1, 1990, and ending before October 1, 1994, or for discharges occurring on or after October 1, 1997, and before October 1, 2022, a hospital is classified as a Medicare-dependent, small rural hospital if it meets all of the following conditions:

(i) It is located in a rural area (as defined in subpart D of this part) or it is located in a State with no rural area and satisfies any of the criteria under § 412.103(a)(1) or (3) or under § 412.103(a)(2) as of January 1, 2018.

(ii) The hospital has 100 or fewer beds as defined in § 412.105(b) during the cost reporting period.

(iii) The hospital is not also classified as a sole community hospital under § 412.92.

(iv) At least 60 percent of the hospital's inpatient days or discharges were attributable to individuals entitled to Medicare Part A benefits during the hospital's cost reporting period or periods as follows, subject to the provisions of paragraph (a)(1)(v) of this section:

(A) The hospital's cost reporting period ending on or after September 30, 1987 and before September 30, 1988.

(B) If the hospital does not have a cost reporting period that meets the criterion set forth in paragraph (a)(1)(iv)(A) of this section, the hospital's cost reporting period beginning on or after October 1, 1986, and before October 1, 1987.

(C) At least two of the last three most recent audited cost reporting periods for which the Secretary has a settled cost report.

(v) If the cost reporting period determined under paragraph (a)(1)(iv) of this section is for less than 12 months, the hospital’s most recent 12-month or longer cost reporting period before the short period is used.

\* \* \* \* \*

(3) Criteria for hospitals that have remote location(s). For a hospital with a main campus and one or more remote locations under a single provider agreement where services are provided and billed under the inpatient hospital prospective payment system and that meets the provider-based criteria at § 413.65 of this chapter as a main campus and a remote location of a hospital, combined data from the main campus and its remote location (s) are required to demonstrate that the criteria in paragraphs (a)(1) and (2) of this section are met. For the location requirement specified in paragraph (a)(1)(i) of this section, the hospital must demonstrate that the main campus and its remote locations each independently satisfy this requirement.

(b) \* \* \*

(4) For applications received on or before September 30, 2018, a determination of MDH status made by the MAC is effective 30 days after the date the MAC provides written notification to the hospital. For applications received on or after October 1, 2018, a determination of MDH status made by the MAC is effective as of the date the MAC receives the complete application. An approved MDH status determination remains in effect unless there is a change in the circumstances under which the status was approved.

\* \* \* \* \*

(c) \* \* \*

(2) \* \* \*

(iii) For discharges occurring during cost reporting periods (or portions thereof) beginning on or after October 1, 2006, and before October 1, 2022, 75 percent of the amount that the Federal rate determined under paragraph (c)(1) of this section is exceeded by the highest of the following:

\* \* \* \* \*

16. Section 412.152 is amended by adding, in alphabetical order, definitions of “Applicable period for dual-eligibility”, “Dual-eligible”, and “Proportion of dual-eligibles” to read as follows:

**§ 412.152 Definitions for the Hospital Readmissions Reduction Program.**

\* \* \* \* \*

Applicable period for dual-eligibility is the 3-year data period corresponding to the applicable period as established by the Secretary for the Hospital Readmissions Reduction Program.

\* \* \* \* \*

Dual-eligible is a patient beneficiary who has been identified as having full benefit status in both the Medicare and Medicaid programs in the State Medicare Modernization Act (MMA) files for the month the beneficiary was discharged from the hospital.

\* \* \* \* \*

Proportion of dual-eligibles is the number of dual-eligible patients among all Medicare Fee-for-Service and Medicare Advantage stays during the applicable period.

\* \* \* \* \*

17. Section 412.164 is amended by revising paragraph (a) to read as follows:

**§ 412.164 Measure selection under the Hospital Value-Based Purchasing (VBP) Program.**

(a) CMS will select measures, other than measures of readmissions, for purposes of the Hospital VBP Program. The measures will be selected from the measures specified under section 1886(b)(3)(B)(viii) of the Act (the Hospital Inpatient Quality Reporting Program).

\* \* \* \* \*

18. Section 412.200 is revised to read as follows:

**§ 412.200 General provisions.**

Beginning with discharges occurring on or after October 1, 1987, hospitals located in Puerto Rico are subject to the rules governing the prospective payment system for inpatient operating costs. Except as provided in this subpart, the provisions of subparts A, B, C, F, G, and H of this part apply to hospitals located in Puerto Rico. Except for § 412.60, which deals with DRG classification and weighting factors, or as otherwise specified, the provisions of subparts D and E, which describe the methodology used to determine prospective payment rates for inpatient operating costs for hospitals, do not apply to hospitals located in Puerto Rico. Instead, the methodology for determining prospective payment rates for inpatient operating costs for these hospitals is set forth in §§ 412.204 through 412.212.

19. Section 412.230 is amended by revising paragraph (d)(5) to read as follows:

**§ 412.230 Criteria for an individual hospital seeking redesignation to another rural area or an urban area.**

\* \* \* \* \*

(d) \* \* \*

(5) Single hospital MSA exception. The requirements of paragraph (d)(1)(iii) of this section do not apply if a hospital is the single hospital in its MSA with published 3-year average hourly wage data included in the current fiscal year inpatient prospective payment system final rule.

20. Section 412.500 is amended by adding paragraphs (a)(9) and (10) to read as follows:

**§ 412.500 Basis and scope of subpart.**

(a) \* \* \*

(9) Section 51005(a) of Public Law 115-123 which extended the blended payment rate for the site neutral payment rate cases to apply to discharges occurring in cost reporting periods beginning in FYs 2018 and 2019.

(10) Section 51005(b) of Public Law which reduces the IPPS comparable amount for the site neutral payment rate cases by 4.6 percent for FYs 2018 through 2026.

\* \* \* \* \*

21. Section 412.522 is amended by—

- a. Adding paragraph (c)(1)(iii);
- b. Removing paragraph (c)(2)(v); and
- c. Revising paragraph (c)(3) introductory text.

The addition and revision read as follows:

**§ 412.522 Application of site neutral payment rate.**

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

(iii) For discharges occurring in fiscal years 2018 through 2026, the amount in paragraph (c)(1)(i) of this section is reduced by 4.6 percent.

\* \* \* \* \*

(3) Transition. For discharges occurring in cost reporting periods beginning on or after October 1, 2015 and on or before September 30, 2019, payment for discharges under paragraph (c)(1) of this section are made using a blended payment rate, which is determined as--

\* \* \* \* \*

22. Section 412.523 is amended by adding paragraphs (c)(3)(xv) and (d)(6) to read as follows:

**§ 412.523 Methodology for calculating the Federal prospective payment rates.**

\* \* \* \* \*

(c) \* \* \*

(3) \* \* \*

(xv) For long-term care hospital prospective payment system fiscal year beginning October 1, 2018, and ending September 30, 2019. The LTCH PPS standard Federal payment rate for the long-term care hospital prospective payment system

beginning October 1, 2018, and ending September 30, 2019, is the standard Federal payment rate for the previous long-term care hospital prospective payment system fiscal year updated by 1.35 percent and further adjusted, as appropriate, as described in paragraph (d) of this section.

\* \* \* \* \*

(d) \* \* \*

(6) Adjustment for the elimination of the limitation on long-term care hospital admissions from referring hospitals. The standard Federal payment rate determined in paragraph (c)(3) of this section is adjusted as follows:

(i) For discharges occurring on or after October 1, 2018 and before October 1, 2019, by a one-time factor so that estimated aggregate payments to LTCH PPS standard Federal rate cases in FY 2019, and the portion of estimated aggregate payments to site neutral cases that are paid based on the LTCH PPS standard Federal rate in FY 2019, are projected to equal estimated aggregate payments that would have been paid for such cases without regard to the elimination of the limitation on long-term care hospital admissions from referring hospitals. This adjustment only applies to the fiscal year involved and will not be taken into account in computing the standard Federal payment rate for a subsequent fiscal year.

(ii) For discharges occurring on or after October 1, 2019 and before October 1, 2020, by a one-time factor so that estimated aggregate payments to LTCH PPS standard Federal rate cases in FY 2020, and the portion of estimated aggregate payments to site neutral payment rate cases that are paid based on the LTCH PPS

standard Federal rate in FY 2020, are projected to equal estimated aggregate payments that would have been paid for such cases without regard to the elimination of the limitation on long-term care hospital admissions from referring hospitals. This adjustment only applies to the fiscal year involved and will not be taken into account in computing the standard Federal payment rate for a subsequent fiscal year.

(iii) For discharges occurring on or after October 1, 2020, by a permanent, one-time factor so that estimated aggregate payments to LTCH PPS standard Federal rate cases in FY 2021 are projected to equal estimated aggregate payments that would have been paid for such cases without regard to the elimination of the limitation on long-term care hospital admissions from referring hospitals.

\* \* \* \* \*

**§ 412.525 [Amended]**

22. Section 412.525 is amended by removing paragraph (d)(6).

**§ 412.538 [Removed and reserved]**

23. Section 412.538 is removed and reserved.

24. Section 412.560 is amended by--

- a. Adding paragraph (b)(3); and
- b. Revising paragraphs (d)(1) and (3).

The addition and revisions read as follows:

**§ 412.560 Requirements under the Long-Term Care Hospital Quality Reporting Program (LTCH QRP).**

\* \* \* \* \*

(b) \* \* \*

(3) CMS may remove a quality measure from the LTCH QRP based on one or more of the following factors:

(i) Measure performance among long-term care hospitals is so high and unvarying that meaningful distinctions in improvements in performance can no longer be made.

(ii) Performance or improvement on a measure does not result in better patient outcomes.

(iii) A measure does not align with current clinical guidelines or practice.

(iv) The availability of a more broadly applicable (across settings, populations, or conditions) measure for the particular topic.

(v) The availability of a measure that is more proximal in time to desired patient outcomes for the particular topic.

(vi) The availability of a measure that is more strongly associated with desired patient outcomes for the particular topic.

(vii) Collection or public reporting of a measure leads to negative unintended consequences other than patient harm.

(viii) The costs associated with a measure outweigh the benefit of its continued use in the program.

\* \* \* \* \*

(d) \* \* \*

(1) Written letter of non-compliance decision. Long-term care hospitals that do not meet the requirement in paragraph (b) of this section for a program year will receive a notification of non-compliance sent through at least one of the following methods: Quality Improvement and Evaluation System (QIES) Assessment Submission and Processing (ASAP) system, the United States Postal Service, or via an e-mail from the MAC.

\* \* \* \* \*

(3) CMS decision on reconsideration request. CMS will notify long-term care hospitals, in writing, of its final decision regarding any reconsideration request through at least one of the following methods: the QIES ASAP system, the United States Postal Service, or via an email from the MAC.

\* \* \* \* \*

**PART 413—PRINCIPLES OF REASONABLE COST REIMBURSEMENT;  
 PAYMENT FOR END-STAGE RENAL DISEASE SERVICES;  
 PROSPECTIVELY DETERMINED PAYMENT RATES FOR SKILLED  
 NURSING FACILITIES ; PAYMENT FOR ACUTE KIDNEY INJURY DIALYSIS**

25. The authority citation for part 413 continues to read as follows:

**Authority:** Secs. 1102, 1812(d), 1814(b), 1815, 1833(a), (i), and (n), 1861(v), 1871, 1881, 1883 and 1886 of the Social Security Act (42 U.S.C. 1302, 1395d(d), 1395f(b), 1395g, 1395l(a), (i), and (n), 1395x(v), 1395hh, 1395rr, 1395tt, and 1395ww); and sec. 124 of Public Law 106-113, 113 Stat. 1501A-332; sec. 3201 of Public Law 112-96, 126 Stat. 156; sec. 632 of Public Law 112-240, 126 Stat. 2354; sec. 217 of Public

Law 113-93, 129 Stat. 1040; and sec. 204 of Public Law 113-295, 128 Stat. 4010; and sec. 808 of Public Law 114-27, 129 Stat. 362.

26. Section 413.24 is amended by revising paragraph (f)(5)(i) to read as follows:

**§ 413.24 Adequate cost data and cost finding.**

\* \* \* \* \*

(f) \* \* \*

(5) \* \* \*

(i) All providers—The provider must accurately complete and submit the required cost reporting forms, including all necessary signatures and supporting documents. For providers claiming costs on their cost reports that are allocated from a home office or chain organization, the Home Office Cost statement must be submitted by the home office or chain organization as set forth in paragraph (f)(5)(i)(E) of this section. A cost report is rejected for lack of supporting documentation if it does not include the following, except as provided in paragraph (f)(5)(i)(E) of this section:

(A) Teaching hospitals--For teaching hospitals, the Intern and Resident Information System (IRIS) data.

(B) Bad debt--Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming Medicare bad debt reimbursement, a detailed bad debt listing that corresponds to the amount of bad debt claimed in the provider's cost report.

(C) DSH eligible hospitals--Effective for cost reporting periods beginning on or after October 1, 2018, for hospitals claiming a disproportionate share hospital payment

adjustment, a detailed listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report. If the hospital submits an amended cost report that changes its Medicaid eligible days, the hospital must submit an amended listing or an addendum to the original listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's amended cost report.

(D) Charity care and uninsured discounts--Effective for cost reporting periods beginning on or after October 1, 2018, for DSH eligible hospitals reporting charity care and/or uninsured discounts, a detailed listing of charity care and/or uninsured discounts that corresponds to the amounts claimed in the DSH eligible hospital's cost report.

(E) Home office cost allocation. (1) Same fiscal year end. Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization with the same fiscal year end, a Home Office Cost Statement completed and submitted by the home office or chain organization to its chain provider's servicing contractor that corresponds to the amounts allocated from the home office or chain organization to the provider's cost report.

(2) Differing fiscal year end. Effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming costs on their cost report that are allocated from a home office or chain organization with a different fiscal year end, a Home Office Cost Statement completed and submitted by the home office or chain organization to its

chain provider’s servicing contractor that corresponds to some portion of the amounts allocated from the home office or chain organization to the provider’s cost report.

\* \* \* \* \*

27. Section 413.79 is amended by revising paragraph (e)(1)(iv) to read as follows:

**§ 413.79 Direct GME payments: Determination of the weighted number of FTE residents.**

\* \* \* \* \*

(e) \* \* \*

(1) \* \* \*

(iv)(A) Effective for Medicare GME affiliation agreements entered into on or after October 1, 2005, except as provided in paragraph (e)(1)(iv)(B) of this section, an urban hospital that qualifies for an adjustment to its FTE cap under paragraph (e)(1) of this section is permitted to be part of a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap only if the adjustment that results from the affiliation is an increase to the urban hospital’s FTE cap.

(B) Effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, an urban hospital that qualifies for an adjustment to its FTE cap under paragraph (e)(1) of this section is permitted to be part of a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap and receive an adjustment that is a decrease to the urban hospital’s FTE cap, provided the Medicare GME affiliated group meets one of the following conditions:

(1) The Medicare GME affiliated group consists solely of two or more urban hospitals that qualify for adjustments to their FTE caps under paragraph (e)(1) of this section.

(2) The Medicare GME affiliated group includes an urban hospital(s) that received FTE cap(s) under paragraph (c)(2)(i) of this section or § 412.105(f)(1)(iv)(A) of this subchapter, or both. This Medicare GME affiliated group must be established effective with a July 1 date (the residency training year) that is at least 5 years after the start of the cost reporting period that coincides with or follows the start of the sixth program year of the first new program for which the hospital’s FTE cap was adjusted in accordance with paragraph (e)(1) of this section or § 412.105(f)(1)(v)(C) or (D) of this subchapter, or both.

\* \* \* \* \*

**PART 424--CONDITIONS FOR MEDICARE PAYMENT**

28. The authority citation for part 424 continues to read as follows:

**Authority:** Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

29. Section 424.11 is amended by revising paragraphs (b) and (c) to read as follows:

**§424.11 General procedures.**

\* \* \* \* \*

(b) Obtaining the certification and recertification statements. No specific procedures or forms are required for certification and recertification statements. The

provider may adopt any method that permits verification. The certification and recertification statements may be entered on forms, notes, or records that the appropriate individual signs, or on a special separate form. Except as provided in paragraph (d) of this section for delayed certifications, there must be a separate signed statement for each certification or recertification. If supporting information for the signed statement is contained in other provider records (such as physicians' progress notes), it need not be repeated in the statement itself.

(c) Required information. The succeeding sections of this subpart set forth specific information required for different types of services.

\* \* \* \* \*

## **PART 495—STANDARDS FOR THE ELECTRONIC HEALTH RECORD TECHNOLOGY INCENTIVE PROGRAM**

30. The authority citation for part 495 continues to read as follows:

**Authority:** Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

31. Section 495.4 is amended—

a. In the definition of “EHR reporting period” by revising paragraph (1)(iii), adding paragraph (1)(iv), revising paragraphs (2)(ii)(C) and (D) and (2)(iii), and adding paragraph (2)(iv);

b. In the definition of “EHR reporting period for a payment adjustment year” by revising paragraph (2)(iii) and adding paragraph (2)(iv), revising paragraph (3)(iii), and adding paragraph (3)(iv); and

c. By revising the definitions of “Payment adjustment year” and “Payment year”.

The revisions and additions read as follows:

**§ 495.4 Definitions.**

\* \* \* \* \*

EHR reporting period. \* \* \*

(1) \* \* \*

(iii) For the CY 2019 payment year under the Medicaid Promoting

Interoperability Program:

(A) For the EP first demonstrating he or she is a meaningful EHR user, any continuous 90-day period within CY 2019.

(B) For the EP who has successfully demonstrated he or she is a meaningful EHR user in any prior year, any continuous 90–day period within CY 2019.

(iv) For the CY 2020 payment year under the Medicaid Promoting

Interoperability Program:

(A) For the EP first demonstrating he or she is a meaningful EHR user, any continuous 90-day period within CY 2020.

(B) For the EP who has successfully demonstrated he or she is a meaningful EHR user in any prior year, any continuous 90–day period within CY 2020.

(2) \* \* \*

(ii) \* \* \*

(C) For the FY 2017 payment year as follows:

(1) Under the Medicaid EHR Incentive Program:

(i) For the eligible hospital or CAH first demonstrating it is a meaningful EHR user, any continuous 90-day period within CY 2017.

(ii) For the eligible hospital or CAH that has successfully demonstrated it is a meaningful EHR user in any prior year, any continuous 90-day period within CY 2017.

(iii) For the eligible hospital or CAH demonstrating the Stage 3 objectives and measures at § 495.24, any continuous 90-day period within CY 2017.

(2) Under the Medicare EHR Incentive Program, for a Puerto Rico eligible hospital, any continuous 14-day period within CY 2017.

(D) For the FY 2018 payment year as follows:

(1) Under the Medicaid Promoting Interoperability Program:

(i) For the eligible hospital or CAH first demonstrating it is a meaningful EHR user, any continuous 90-day period within CY 2018.

(ii) For the eligible hospital or CAH that has successfully demonstrated it is a meaningful EHR user in any prior year, any continuous 90-day period within CY 2018.

(2) Under the Medicare Promoting Interoperability Program, for a Puerto Rico eligible hospital, any continuous 90-day period within CY 2018.

(iii) For the FY 2019 payment year as follows:

(A) Under the Medicaid Promoting Interoperability Program:

(1) For the eligible hospital or CAH first demonstrating it is a meaningful EHR user, any continuous 90-day period within CY 2019.

(2) For the eligible hospital or CAH that has successfully demonstrated it is a meaningful EHR user in any prior year, any continuous 90-day period within CY 2019.

(B) Under the Medicare Promoting Interoperability Program, for a Puerto Rico eligible hospital, any continuous 90-day period within CY 2019.

(iv) For the FY 2020 payment year as follows:

(A) Under the Medicaid Promoting Interoperability Program:

(1) For the eligible hospital or CAH first demonstrating it is a meaningful EHR user, any continuous 90-day period within CY 2020.

(2) For the eligible hospital or CAH that has successfully demonstrated it is a meaningful EHR user in any prior year, any continuous 90-day period within CY 2020.

(B) Under the Medicare Promoting Interoperability Program, for a Puerto Rico eligible hospital, any continuous 90-day period within CY 2020.

\* \* \* \* \*

EHR reporting period for a payment adjustment year. \* \* \*

(2) \* \* \*

(iii) The following are applicable for 2019:

(A) If an eligible hospital has not successfully demonstrated it is a meaningful EHR user in a prior year, the EHR reporting period is any continuous 90-day period within CY 2019 and applies for the FY 2020 and 2021 payment adjustment years. For the FY 2020 payment adjustment year, the EHR reporting period must end before and the eligible hospital must successfully register for and attest to meaningful use no later than October 1, 2019.

(B) If in a prior year an eligible hospital has successfully demonstrated it is a meaningful EHR user, the EHR reporting period is any continuous 90-day period within CY 2019 and applies for the FY 2021 payment adjustment year.

(iv) The following are applicable for 2020:

(A) If an eligible hospital has not successfully demonstrated it is a meaningful EHR user in a prior year, the EHR reporting period is any continuous 90-day period within CY 2020 and applies for the FY 2021 and 2022 payment adjustment years. For the FY 2021 payment adjustment year, the EHR reporting period must end before and the eligible hospital must successfully register for and attest to meaningful use no later than October 1, 2020.

(B) If in a prior year an eligible hospital has successfully demonstrated it is a meaningful EHR user, the EHR reporting period is any continuous 90- day period within CY 2020 and applies for the FY 2022 payment adjustment year.

(3) \* \* \*

(iii) The following are applicable for 2019:

(A) If a CAH has not successfully demonstrated it is a meaningful EHR user in a prior year, the EHR reporting period is any continuous 90-day period within CY 2019 and applies for the FY 2019 payment adjustment year.

(B) If in a prior year a CAH has successfully demonstrated it is a meaningful EHR user, the EHR reporting period is any continuous 90-day period within CY 2019 and applies for the FY 2019 payment adjustment year.

(iv) The following are applicable for 2020:

(A) If a CAH has not successfully demonstrated it is a meaningful EHR user in a prior year, the EHR reporting period is any continuous 90-day period within CY 2020 and applies for the FY 2020 payment adjustment year.

(B) If in a prior year a CAH has successfully demonstrated it is a meaningful EHR user, the EHR reporting period is any continuous 90-day period within CY 2020 and applies for the FY 2020 payment adjustment year.

\* \* \* \* \*

Payment adjustment year means the following:

(1) For an EP, a calendar year beginning with CY 2015.

(2) For a CAH or an eligible hospital, a Federal fiscal year beginning with FY 2015.

(3) For a Puerto Rico eligible hospital, a Federal fiscal year beginning with FY 2022.

Payment year means the following:

(1) For an EP, a calendar year beginning with CY 2011.

(2) For a CAH or an eligible hospital, a Federal fiscal year beginning with FY 2011.

(3) For a Puerto Rico eligible hospital, a Federal fiscal year beginning with FY 2016.

\* \* \* \* \*

32. Section 495.24 is amended by revising the introductory text, paragraphs (c) and (d) headings and adding paragraph (e) to read as follows:

**§ 495.24 Stage 3 meaningful use objectives and measures for EPs, eligible hospitals and CAHs for 2019 and subsequent years.**

The criteria specified in paragraphs (c) and (d) of this section are optional for 2017 and 2018 for EPs, eligible hospitals, and CAHs that have successfully demonstrated meaningful use in a prior year. The criteria specified in paragraph (d) of this section are applicable for all EPs for 2019 and subsequent years, and for eligible hospitals and CAHs attesting to a State for the Medicaid Promoting Interoperability Program for 2019 and subsequent years. The criteria specified in paragraph (e) of this section are applicable for eligible hospitals and CAHs attesting to CMS for 2019 and subsequent years.

\* \* \* \* \*

(c) Stage 3 objectives and measures for eligible hospitals and CAHs attesting to CMS—

\* \* \* \* \*

(d) Stage 3 objectives and measures for all EPs for 2019 and subsequent years, and for eligible hospitals and CAHs attesting to a State for the Medicaid Promoting Interoperability Program for 2019 and subsequent years—

\* \* \* \* \*

(e) Stage 3 objectives and measures for eligible hospitals and CAHs attesting to CMS for 2019 and subsequent years—(1) General rule. Except as specified in paragraph (e)(2) of this section, eligible hospitals and CAHs must meet all objectives and associated measures of the Stage 3 criteria specified in this paragraph (e) and earn a total score of at least 50 points to meet the definition of a meaningful EHR user.

(2) Exclusion for nonapplicable measures. (i) An eligible hospital or CAH may exclude a particular measure that includes an option for exclusion contained in this paragraph (e) if the eligible hospital or CAH meets the following requirements:

(A) Meets the criteria in the applicable measure that would permit the exclusion.

(B) Attests to the exclusion.

(ii) Distribution of points for nonapplicable measures. For eligible hospitals or CAHs that claim such exclusion, the points assigned to the excluded measure will be distributed to other measures as outlined in this paragraph (e).

(3) Objectives and associated measures in this paragraph (e) that rely on measures that count unique patients or actions. (i) If a measure (or associated objective) in this paragraph (e) references paragraph (e)(3) of this section, the measure may be calculated by reviewing only the actions for patients whose records are maintained using CEHRT. A patient's record is maintained using CEHRT if sufficient data were entered in the CEHRT to allow the record to be saved, and not rejected due to incomplete data.

(ii) If the objective and associated measure does not reference this paragraph (e)(3), the measure must be calculated by reviewing all patient records, not just those maintained using CEHRT.

(4) Protect patient health information—(i) Objective. Protect electronic protected health information (ePHI) created or maintained by the CEHRT through the implementation of appropriate technical, administrative, and physical safeguards.

(ii) Measure scoring. Eligible hospitals and CAHs are required to report on the security risk analysis measure in paragraph (e)(4)(iii) of this section, but no points are available for this measure.

(iii) Security risk analysis measure. Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the security (including encryption) of data created or maintained by CEHRT in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), implement security updates as necessary, and correct identified security deficiencies as part of the provider's risk management process.

(5) Electronic prescribing—(i) Objective. Generate and transmit permissible discharge prescriptions electronically (eRx).

(ii) Measures scoring. (A) In 2019, eligible hospitals and CAHs must meet the e-Prescribing measure in paragraph (e)(5)(iii)(A) of this section and have the option to report on the query of PDMP measure and verify opioid treatment agreement measure in paragraphs (e)(5)(iii)(B) and (C) of this section. The electronic prescribing objective in paragraph (e)(5)(i) of this section is worth up to 20 points.

(B) In 2020 and subsequent years, eligible hospitals and CAHs must meet the e-Prescribing measure in paragraph (e)(5)(iii)(A) of this section and the query of PDMP measure in paragraph (e)(5)(iii)(B) of this section. In 2020, eligible hospitals and CAHs have the option to report on the verify opioid treatment agreement measure in paragraph (e)(5)(iii)(C) of this section. In 2020, the electronic prescribing objective in paragraph (e)(5)(i) of this section is worth up to 15 points.

(iii) Measures. (A) e-Prescribing measure. Subject to paragraph (e)(3) of this section, at least one hospital discharge medication order for permissible prescriptions (for new and changed prescriptions) is queried for a drug formulary and transmitted electronically using CEHRT. This measure is worth up to 10 points in 2019 and 5 points in subsequent years.

(B) Query of prescription drug monitoring program (PDMP) measure. Subject to paragraph (e)(3) of this section, for at least one Schedule II opioid electronically prescribed using CEHRT during the EHR reporting period, the eligible hospital or CAH uses data from CEHRT to conduct a query of a Prescription Drug Monitoring Program (PDMP) for prescription drug history, except where prohibited and in accordance with applicable law. This measure is worth up to 5 bonus points in CY 2019 and 5 points in subsequent years.

(C) Verify opioid treatment agreement measure. Subject to paragraph (e)(3) of this section, for at least one unique patient for whom a Schedule II opioid was electronically prescribed by the eligible hospital or CAH using CEHRT during the EHR reporting period, if the total duration of the patient's Schedule II opioid prescriptions is at least 30 cumulative days within a 6-month look-back period, the eligible hospital or CAH seeks to identify the existence of a signed opioid treatment agreement and incorporates it into the patient's electronic health record using CEHRT. This measure is worth up to 5 bonus points in CY 2019 and CY 2020.

(iv) Exclusions in accordance with paragraph (e)(2) of this section and redistribution of points. An exclusion claimed under paragraph (e)(5)(v)(A) of this

section will redistribute 10 points in CY 2019 and 5 points in CY 2020 equally among the measures associated with the health information exchange objective under paragraph (e)(6) of this section. Beginning in CY 2020, an exclusion claimed under paragraph (e)(5)(v)(B), (C), or (D) of this section will redistribute 5 points from the measure specified in paragraph (e)(5)(iii)(B) of this section to the e-Prescribing measure under paragraph (e)(5)(iii)(A) of this section.

(v) Exclusions in accordance with paragraph (e)(2) of this section.

(A) Beginning with the EHR reporting period in CY 2019, any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions and there are no pharmacies that accept electronic prescriptions within 10 miles at the start of the eligible hospital or CAH's EHR reporting period may be excluded from the measure specified in paragraph (e)(5)(iii)(A) of this section.

(B) Beginning with the EHR reporting period in CY 2020, an eligible hospital or CAH that qualifies for the exclusion in paragraph (e)(5)(v)(A) of this section is also excluded from the measure specified in paragraph (e)(5)(iii)(B) of this section.

(C) Beginning with the EHR reporting period in CY 2020, any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions for controlled substances and is not located within 10 miles of any pharmacy that accepts electronic prescriptions for controlled substances at the start of their EHR reporting period may be excluded from the measure specified in paragraph (e)(5)(iii)(B) of this section.

(D) Beginning with the EHR reporting period in CY 2020, any eligible hospital and CAH that is unable to report on the measure specified in paragraph (e)(5)(iii)(B) of this section in accordance with applicable law may be excluded from that measure.

(6) Health information exchange—(i) Objective. The eligible hospital or CAH provides a summary of care record when transitioning or referring their patient to another setting of care, receives or retrieves a summary of care record upon the receipt of a transition or referral or upon the first patient encounter with a new patient, and incorporates summary of care information from other providers into their EHR using the functions of CEHRT.

(ii) Measures. Eligible hospitals and CAHs must meet both of the following measures (each worth up to 20 points), and could receive up to 40 points for this objective:

(A) Support electronic referral loops by sending health information measure: Subject to paragraph (e)(3) of this section, for at least one transition of care or referral, the eligible hospital or CAH that transitions or refers its patient to another setting of care or provider of care—

- (1) Creates a summary of care record using CEHRT; and
- (2) Electronically exchanges the summary of care record.

(B) Support electronic referral loops by receiving and incorporating health information measure: Subject to paragraph (e)(3) of this section, for at least one electronic summary of care record received for patient encounters during the EHR reporting period for which an eligible hospital or CAH was the receiving party of a

transition of care or referral, or for patient encounters during the EHR reporting period in which the eligible hospital or CAH has never before encountered the patient, the eligible hospital or CAH conducts clinical information reconciliation for medication, medication allergy, and current problem list.

(iii) Exclusions in accordance with paragraph (e)(2) of this section. Any eligible hospital or CAH that is unable to implement the support electronic referral loops by receiving and incorporating health information measure under paragraph (e)(6)(ii)(B) of this section for an EHR reporting period in 2019 may be excluded from that measure. Claiming the exclusion will redistribute 20 points to the support electronic referral loops by sending health information measure under paragraph (e)(6)(ii)(A) of this section.

(7) Provider to patient exchange.—(i) Objective. The eligible hospital or CAH provides patients (or patient-authorized representative) with timely electronic access to their health information.

(ii) Provide patients electronic access to their health information measure. Eligible hospitals and CAHs must meet the following measure, and could receive up to 40 points for this objective beginning in CY 2019. For at least one unique patient discharged from the eligible hospital or CAH inpatient or emergency department (POS 21 or 23)--

(A) The patient (or patient-authorized representative) is provided timely access to view online, download, and transmit his or her health information; and

(B) The eligible hospital or CAH ensures the patient's health information is available for the patient (or patient-authorized representative) to access using any

application of their choice that is configured to meet the technical specifications of the API in the eligible hospital or CAH's CEHRT. This measure is worth up to 40 points beginning in CY 2019.

(8) Public health and clinical data exchange. — (i) Objective. The eligible hospital or CAH is in active engagement with a public health agency (PHA) or clinical data registry (CDR) to submit electronic public health data in a meaningful way using CEHRT, except where prohibited, and in accordance with applicable law and practice.

(ii) Measures. In order to meet the objective under paragraph (e)(8)(i) of this section, an eligible hospital or CAH must meet any two measures specified in paragraphs (e)(8)(ii)(A) through (F) of this section. Eligible hospitals and CAHs could receive a total of 10 points for this objective.

(A) Syndromic surveillance reporting measure. The eligible hospital or CAH is in active engagement with a public health agency to submit syndromic surveillance data from an urgent care setting.

(B) Immunization registry reporting measure. The eligible hospital or CAH is in active engagement with a public health agency to submit immunization data and receive immunization forecasts and histories from the public health immunization registry/immunization information system (IIS).

(C) Electronic case reporting measure. The eligible hospital or CAH is in active engagement with a public health agency to submit case reporting of reportable conditions.

(D) Public health registry reporting measure. The eligible hospital or CAH is in active engagement with a public health agency to submit data to public health registries.

(E) Clinical data registry reporting measure. The eligible hospital or CAH is in active engagement to submit data to a clinical data registry.

(F) Electronic reportable laboratory result reporting measure. The eligible hospital or CAH is in active engagement with a public health agency to submit electronic reportable laboratory results.

(iii) Exclusions in accordance with paragraph (e)(2) of this section. If an exclusion is claimed under paragraphs (e)(8)(iii)(A) through (F) of this section for each of the two measures selected for reporting, the 10 points for the objective specified in paragraph (e)(8)(i) of this section will be redistributed to the provide patients electronic access to their health information measure under paragraph (e)(7)(ii) of this section.

(A) Any eligible hospital or CAH meeting one or more of the following criteria may be excluded from the syndromic surveillance reporting measure specified in paragraph (e)(8)(ii)(A) of this section if the eligible hospital or CAH—

(1) Does not have an emergency or urgent care department.

(2) Operates in a jurisdiction for which no public health agency is capable of receiving electronic syndromic surveillance data in the specific standards required to meet the CEHRT definition at the start of the EHR reporting period.

(3) Operates in a jurisdiction where no public health agency has declared readiness to receive syndromic surveillance data from eligible hospitals or CAHs as of 6 months prior to the start of the EHR reporting period.

(B) Any eligible hospital or CAH meeting one or more of the following criteria may be excluded from the immunization registry reporting measure specified in paragraph (e)(8)(ii)(B) of this section if the eligible hospital or CAH—

(1) Does not administer any immunizations to any of the populations for which data is collected by its jurisdiction's immunization registry or immunization information system during the EHR reporting period.

(2) Operates in a jurisdiction for which no immunization registry or immunization information system is capable of accepting the specific standards required to meet the CEHRT definition at the start of the EHR reporting period.

(3) Operates in a jurisdiction where no immunization registry or immunization information system has declared readiness to receive immunization data as of 6 months prior to the start of the EHR reporting period.

(C) Any eligible hospital or CAH meeting one or more of the following criteria may be excluded from the electronic case reporting measure specified in paragraph (e)(8)(ii)(C) of this section if the eligible hospital or CAH—

(1) Does not treat or diagnose any reportable diseases for which data is collected by their jurisdiction's reportable disease system during the EHR reporting period.

(2) Operates in a jurisdiction for which no public health agency is capable of receiving electronic case reporting data in the specific standards required to meet the CEHRT definition at the start of their EHR reporting period.

(3) Operates in a jurisdiction where no public health agency has declared readiness to receive electronic case reporting data as of 6 months prior to the start of the EHR reporting period.

(D) Any eligible hospital or CAH meeting at least one of the following criteria may be excluded from the public health registry reporting measure specified in paragraph (e)(8)(ii)(D) of this section if the eligible hospital or CAH—

(1) Does not diagnose or directly treat any disease or condition associated with a public health registry in its jurisdiction during the EHR reporting period.

(2) Operates in a jurisdiction for which no public health agency is capable of accepting electronic registry transactions in the specific standards required to meet the CEHRT definition at the start of the EHR reporting period.

(3) Operates in a jurisdiction where no public health registry for which the eligible hospital or CAH is eligible has declared readiness to receive electronic registry transactions as of 6 months prior to the start of the EHR reporting period.

(E) Any eligible hospital or CAH meeting at least one of the following criteria may be excluded from the clinical data registry reporting measure specified in paragraph (e)(8)(ii)(E) of this section if the eligible hospital or CAH—

(1) Does not diagnose or directly treat any disease or condition associated with a clinical data registry in their jurisdiction during the EHR reporting period.

(2) Operates in a jurisdiction for which no clinical data registry is capable of accepting electronic registry transactions in the specific standards required to meet the CEHRT definition at the start of the EHR reporting period.

(3) Operates in a jurisdiction where no clinical data registry for which the eligible hospital or CAH is eligible has declared readiness to receive electronic registry transactions as of 6 months prior to the start of the EHR reporting period.

(F) Any eligible hospital or CAH meeting one or more of the following criteria may be excluded from the electronic reportable laboratory result reporting measure specified in paragraph (e)(8)(ii)(F) of this section if the eligible hospital or CAH—

(1) Does not perform or order laboratory tests that are reportable in its jurisdiction during the EHR reporting period.

(2) Operates in a jurisdiction for which no public health agency that is capable of accepting the specific ELR standards required to meet the CEHRT definition at the start of the EHR reporting period.

(3) Operates in a jurisdiction where no public health agency has declared readiness to receive electronic reportable laboratory results from an eligible hospital or CAH as of 6 months prior to the start of the EHR reporting period.

33. Section 495.40 is amended by adding paragraph (b)(2)(vii) to read as follows:

**§ 495.40 Demonstration of meaningful use criteria.**

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(vii) Exception for dual-eligible hospitals and CAHs beginning in CY 2019. (A) Beginning with the EHR reporting period in CY 2019, dual-eligible hospitals and CAHs (those that are eligible for an incentive payment under

Medicare for meaningful use of CEHRT and/or subject to the Medicare payment reduction for failing to demonstrate meaningful use, and are also eligible to earn a Medicaid incentive payment for meaningful use) must satisfy the requirements under paragraph (b)(2) of this section by attestation and reporting information to CMS, not to their respective state Medicaid agency.

(B) Dual-eligible eligible hospitals and CAHs that demonstrate meaningful use to their state Medicaid agency may only qualify for an incentive payment under Medicaid and will not qualify for an incentive payment under Medicare and/or avoid the Medicare payment reduction.

\* \* \* \* \*

34. Section 495.100 is amended by revising the definition of “Eligible hospital” and adding a definition of “Puerto Rico eligible hospital” in alphabetical order to read as follows:

**§ 495.100 Definitions.**

\* \* \* \* \*

Eligible hospital means a hospital subject to the prospective payment system specified in § 412.1(a)(1) of this chapter, excluding those hospitals specified in § 412.23 of this chapter, excluding those hospital units specified in § 412.25 of this chapter, and including Puerto Rico eligible hospitals unless otherwise indicated.

\* \* \* \* \*

Puerto Rico eligible hospital means a subsection (d) Puerto Rico hospital as defined in section 1886(d)(9)(A) of the Social Security Act.

\* \* \* \* \*

35. Section 495.104 is amended by adding paragraphs (b)(6) through (10) and (c)(5)(vi) through (x) to read as follows:

**§ 495.104 Incentive payments to eligible hospitals.**

\* \* \* \* \*

(b) \* \* \*

(6) Puerto Rico eligible hospitals whose first payment year is FY 2016 may receive such payments for FYs 2016 through 2019.

(7) Puerto Rico eligible hospitals whose first payment year is FY 2017 may receive such payments for FYs 2017 through 2020.

(8) Puerto Rico eligible hospitals whose first payment year is FY 2018 may receive such payments for FYs 2018 through 2021.

(9) Puerto Rico eligible hospitals whose first payment year is FY 2019 may receive such payments for FYs 2019 through 2021.

(10) Puerto Rico eligible hospitals whose first payment year is FY 2020 may receive such payments for FYs 2020 through 2021.

(c) \* \* \*

(5) \* \* \*

(vi) For Puerto Rico eligible hospitals whose first payment year is FY 2016—

(A) 1 for FY 2016;

(B) 3/4 for FY 2017;

(C) 1/2 for FY 2018; and

(D) 1/4 for FY 2019.

(vii) For Puerto Rico eligible hospitals whose first payment year is FY 2017—

(A) 1 for FY 2017;

(B) 3/4 for FY 2018;

(C) 1/2 for FY 2019; and

(D) 1/4 for FY 2020;

(viii) For Puerto Rico eligible hospitals whose first payment year is FY 2018—

(A) 1 for FY 2018;

(B) 3/4 for FY 2018;

(C) 1/2 for FY 2019; and

(D) 1/4 for FY 2020.

(ix) For Puerto Rico eligible hospitals whose first payment year is FY 2019—

(A) 3/4 for FY 2019;

(B) 1/2 for FY 2020; and

(C) 1/4 for FY 2021.

(x) For Puerto Rico eligible hospitals whose first payment year is FY 2020—

(A) 1/2 for FY 2020; and

(B) 1/4 for FY 2021.

\* \* \* \* \*

36. Section 495.200 is amended by revising the definitions of “MA payment adjustment year” and “Payment year” to read as follows:

**§ 495.200 Definitions.**

\* \* \* \* \*

MA payment adjustment year means—

(1) Except as provided in paragraph (2) of this definition, for qualifying MA organizations that receive an MA EHR incentive payment for at least 1 payment year, calendar years beginning with CY 2015.

(2) For qualifying MA organizations that receive an MA EHR incentive payment for a qualifying MA-affiliated eligible hospital in Puerto Rico for at least 1 payment year, and that have not previously received an MA EHR incentive payment for a qualifying MA-affiliated eligible hospital not in Puerto Rico, calendar years beginning with CY 2022.

(3) For MA-affiliated eligible hospitals, the applicable EHR reporting period for purposes of determining whether the MA organization is subject to a payment adjustment is the Federal fiscal year ending in the MA payment adjustment year.

(4) For MA EPs, the applicable EHR reporting period for purposes of determining whether the MA organization is subject to a payment adjustment is the calendar year concurrent with the payment adjustment year.

\* \* \* \* \*

Payment year means--

(1) For a qualifying MA EP, a calendar year beginning with CY 2011 and ending with CY 2016; and

(2) For an eligible hospital, a Federal fiscal year beginning with FY 2011 and ending with FY 2016; and

(3) For an eligible hospital in Puerto Rico, a Federal fiscal year beginning with FY 2016 and ending with FY 2021.

\* \* \* \* \*

37. Section 495.211 is amended by adding paragraph (e)(4) to read as follows:

**§ 495.211 Payment adjustments effective for 2015 and subsequent MA payment years with respect to MA EPs and MA-affiliated eligible hospitals.**

\* \* \* \* \*

(e) \* \* \*

(4) For MA payment adjustment years prior to 2022, subsection (d) Puerto Rico hospitals are neither potentially qualifying MA-affiliated eligible hospitals nor qualifying MA-affiliated eligible hospitals for purposes of applying the payment adjustments under paragraph (e) of this section.

38. Section 495.316 is amended by revising paragraph (g)(2) to read as follows:

**§ 495.316 State monitoring and reporting regarding activities required to receive an incentive payment.**

\* \* \* \* \*

(g) \* \* \*

(2) Subject to paragraph (h)(2) of this section, provider-level attestation data for each eligible hospital that attests to demonstrating meaningful use for each payment year beginning with 2013 and ending after 2018.

\* \* \* \* \*

39. Section 495.322 is revised to read as follows:

**§ 495.322 FFP for reasonable administrative expenses.**

(a) Subject to prior approval conditions at § 495.324, FFP is available at 90 percent in State expenditures for administrative activities in support of implementing incentive payments to Medicaid eligible providers.

(b) FFP available under paragraph (a) of this section is available only for expenditures incurred on or before September 30, 2022, except for expenditures related to audit and appeal activities required under this subpart, which must be incurred on or before September 30, 2023.

40. Section 495.324 is amended by revising paragraphs (b)(2) and (3) and (d) to read as follows:

**§ 495.324 Prior approval conditions.**

\* \* \* \* \*

(b) \* \* \*

(2) For the acquisition solicitation documents and any contract that a State may utilize to complete activities under this subpart, unless specifically exempted by the Department of Health and Human Services, prior to release of the acquisition solicitation documents or prior to execution of the contract, when the contract is anticipated to or will exceed \$500,000.

(3) For contract amendments, unless specifically exempted by the Department of Health and Human Services, prior to execution of the contract amendment, involving contract cost increases exceeding \$500,000 or contract time extensions of more than 60 days.

\* \* \* \* \*

(d) A State must obtain prior written approval from HHS of its justification for a sole source acquisition, when it plans to acquire noncompetitively from a nongovernmental source HIT equipment or services, with proposed FFP under this subpart if the total State and Federal acquisition cost is more than \$500,000.

CMS-1694-F

Dated: July 27, 2018.

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**Seema Verma,**

Administrator,

Centers for Medicare and Medicaid

Services.

Dated: July 30, 2018.

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**Alex M. Azar II,**

Secretary,

Department of Health and Human Services.

**Note: The following Addendum and Appendixes will not appear in the Code of Federal Regulations.**

**Addendum—Schedule of Standardized Amounts, Update Factors, Rate-of-Increase Percentages Effective with Cost Reporting Periods Beginning on or after October 1, 2018, and Payment Rates for LTCHs Effective for Discharges Occurring on or after October 1, 2018**

### **I. Summary and Background**

In this Addendum, we are setting forth a description of the methods and data we used to determine the prospective payment rates for Medicare hospital inpatient operating costs and Medicare hospital inpatient capital-related costs for FY 2019 for acute care hospitals. We also are setting forth the rate-of-increase percentage for updating the target amounts for certain hospitals excluded from the IPPS for FY 2019. We note that, because certain hospitals excluded from the IPPS are paid on a reasonable cost basis subject to a rate-of-increase ceiling (and not by the IPPS), these hospitals are not affected by the figures for the standardized amounts, offsets, and budget neutrality factors. Therefore, in this final rule, we are setting forth the rate-of-increase percentage for updating the target amounts for certain hospitals excluded from the IPPS that will be effective for cost reporting periods beginning on or after October 1, 2018.

In addition, we are setting forth a description of the methods and data we used to determine the LTCH PPS standard Federal payment rate that will be applicable to Medicare LTCHs for FY 2019.

In general, except for SCHs and MDHs, for FY 2019, each hospital's payment per discharge under the IPPS is based on 100 percent of the Federal national rate, also known as the national adjusted standardized amount. This amount reflects the national average hospital cost per case from a base year, updated for inflation.

SCHs are paid based on whichever of the following rates yields the greatest aggregate payment: the Federal national rate (including, as discussed in section IV.G. of the preamble of this final rule, uncompensated care payments under section 1886(r)(2) of the Act); the updated hospital-specific rate based on FY 1982 costs per discharge; the updated hospital-specific rate based on FY 1987 costs per discharge; the updated hospital-specific rate based on FY 1996 costs per discharge; or the updated hospital-specific rate based on FY 2006 costs per discharge.

Under section 1886(d)(5)(G) of the Act, MDHs historically were paid based on the Federal national rate or, if higher, the Federal national rate plus 50 percent of the difference between the Federal national rate and the updated hospital-specific rate based on FY 1982 or FY 1987 costs per discharge, whichever was higher. However, section 5003(a)(1) of Pub. L. 109–171 extended and modified the MDH special payment provision that was previously set to expire on October 1, 2006, to include discharges occurring on or after October 1, 2006, but before October 1, 2011. Under section 5003(b) of Pub. L. 109–171, if the change results in an increase to an MDH's target amount, we must rebase an MDH's hospital specific rates based on its FY 2002 cost report. Section 5003(c) of Pub. L. 109–171 further required that MDHs be paid based on the Federal national rate or, if higher, the Federal national rate plus 75 percent of the

difference between the Federal national rate and the updated hospital specific rate.

Further, based on the provisions of section 5003(d) of Pub. L. 109–171, MDHs are no longer subject to the 12-percent cap on their DSH payment adjustment factor. Section 50205 of the Bipartisan Budget Act of 2018 extended the MDH program for discharges on or after October 1, 2017 through September 30, 2022.

As discussed in section IV.B. of the preamble of this final rule, in accordance with section 1886(d)(9)(E) of the Act as amended by section 601 of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113), for FY 2019, subsection (d) Puerto Rico hospitals will continue to be paid based on 100 percent of the national standardized amount. Because Puerto Rico hospitals are paid 100 percent of the national standardized amount and are subject to the same national standardized amount as subsection (d) hospitals that receive the full update, our discussion below does not include references to the Puerto Rico standardized amount or the Puerto Rico-specific wage index.

As discussed in section II. of this Addendum, as we proposed, we are making changes in the determination of the prospective payment rates for Medicare inpatient operating costs for acute care hospitals for FY 2019. In section III. of this Addendum, we discuss our policy changes for determining the prospective payment rates for Medicare inpatient capital-related costs for FY 2019. In section IV. of this Addendum, we are setting forth the rate-of-increase percentage for determining the rate-of-increase limits for certain hospitals excluded from the IPPS for FY 2019. In section V. of this Addendum, we discuss policy changes for determining the LTCH PPS standard Federal rate for LTCHs paid under the LTCH PPS for FY 2019. The tables to which we refer in

the preamble of this final rule are listed in section VI. of this Addendum and are available via the Internet on the CMS website.

## **II. Changes to Prospective Payment Rates for Hospital Inpatient Operating Costs for Acute Care Hospitals for FY 2019**

The basic methodology for determining prospective payment rates for hospital inpatient operating costs for acute care hospitals for FY 2005 and subsequent fiscal years is set forth under § 412.64. The basic methodology for determining the prospective payment rates for hospital inpatient operating costs for hospitals located in Puerto Rico for FY 2005 and subsequent fiscal years is set forth under §§ 412.211 and 412.212.

Below we discuss the factors we used for determining the prospective payment rates for FY 2019.

In summary, the standardized amounts set forth in Tables 1A, 1B, and 1C that are listed and published in section VI. of this Addendum (and available via the Internet on the CMS website) reflect—

- Equalization of the standardized amounts for urban and other areas at the level computed for large urban hospitals during FY 2004 and onward, as provided for under section 1886(d)(3)(A)(iv)(II) of the Act.
- The labor-related share that is applied to the standardized amounts to give the hospital the highest payment, as provided for under sections 1886(d)(3)(E) and 1886(d)(9)(C)(iv) of the Act. For FY 2019, depending on whether a hospital submits quality data under the rules established in accordance with section 1886(b)(3)(B)(viii) of the Act (hereafter referred to as a hospital that submits quality data) and is a meaningful

EHR user under section 1886(b)(3)(B)(ix) of the Act (hereafter referred to as a hospital that is a meaningful EHR user), there are four possible applicable percentage increases that can be applied to the national standardized amount. We refer readers to section IV.B. of the preamble of this final rule for a complete discussion on the FY 2019 inpatient hospital update. Below is a table with these four options:

<b>FY 2019</b>	<b>Hospital Submitted Quality Data and is a Meaningful EHR User</b>	<b>Hospital Submitted Quality Data and is NOT a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User</b>
Market Basket Rate-of-Increase	2.9	2.9	2.9	2.9
Adjustment for Failure to Submit Quality Data under Section 1886(b)(3)(B)(viii) of the Act	0.0	0.0	-0.725	-0.725
Adjustment for Failure to be a Meaningful EHR User under Section 1886(b)(3)(B)(ix) of the Act	0.0	-2.175	0.0	-2.175
MFP Adjustment under Section 1886(b)(3)(B)(xi) of the Act	-0.8	-0.8	-0.8	-0.8
Statutory Adjustment under Section 1886(b)(3)(B)(xii) of the Act	-0.75	-0.75	-0.75	-0.75
<b>Applicable Percentage Increase Applied to Standardized Amount</b>	<b>1.35</b>	<b>-0.825</b>	<b>0.625</b>	<b>-1.55</b>

We note that section 1886(b)(3)(B)(viii) of the Act, which specifies the adjustment to the applicable percentage increase for “subsection (d)” hospitals that do not

submit quality data under the rules established by the Secretary, is not applicable to hospitals located in Puerto Rico.

In addition, section 602 of Pub. L. 114-113 amended section 1886(n)(6)(B) of the Act to specify that Puerto Rico hospitals are eligible for incentive payments for the meaningful use of certified EHR technology, effective beginning FY 2016, and also to apply the adjustments to the applicable percentage increase under section 1886(b)(3)(B)(ix) of the Act to Puerto Rico hospitals that are not meaningful EHR users, effective FY 2022. Accordingly, because the provisions of section 1886(b)(3)(B)(ix) of the Act are not applicable to hospitals located in Puerto Rico until FY 2022, the adjustments under this provision are not applicable for FY 2019.

- An adjustment to the standardized amount to ensure budget neutrality for DRG recalibration and reclassification, as provided for under section 1886(d)(4)(C)(iii) of the Act.

- An adjustment to ensure the wage index and labor-related share changes (depending on the fiscal year) are budget neutral, as provided for under section 1886(d)(3)(E)(i) of the Act (as discussed in the FY 2006 IPPS final rule (70 FR 47395) and the FY 2010 IPPS final rule (74 FR 44005). We note that section 1886(d)(3)(E)(i) of the Act requires that when we compute such budget neutrality, we assume that the provisions of section 1886(d)(3)(E)(ii) of the Act (requiring a 62-percent labor-related share in certain circumstances) had not been enacted.

- An adjustment to ensure the effects of geographic reclassification are budget neutral, as provided for under section 1886(d)(8)(D) of the Act, by removing the FY 2018 budget neutrality factor and applying a revised factor.

- A positive adjustment of 0.5 percent in FYs 2019 through 2023 as required under section 414 of the MACRA.

- An adjustment to ensure the effects of the Rural Community Hospital Demonstration program required under section 410A of Pub. L. 108-173, as amended by sections 3123 and 10313 of Pub. L. 111-148, which extended the demonstration program for an additional 5 years, as amended by section 15003 of Pub. L. 114-255 which amended section 410A of Pub. L. 108-173 to provide for a 10-year extension of the demonstration program (in place of the 5-year extension required by the Affordable Care Act) beginning on the date immediately following the last day of the initial 5-year period under section 410A(a)(5) of Pub. L. 108-173, are budget neutral as required under section 410A(c)(2) of Pub. L. 108-173.

- An adjustment to remove the FY 2018 outlier offset and apply an offset for FY 2019, as provided for in section 1886(d)(3)(B) of the Act.

For FY 2019, consistent with current law, as we proposed, we applied the rural floor budget neutrality adjustment to hospital wage indexes. Also, consistent with section 3141 of the Affordable Care Act, instead of applying a State-level rural floor budget neutrality adjustment to the wage index, as we proposed, we applied a uniform, national budget neutrality adjustment to the FY 2019 wage index for the rural floor. We note that, in section III.H.2.b. of the preamble to this final rule, as we proposed, we are not

extending the imputed floor policy (neither the original methodology nor the alternative methodology) for FY 2019. Therefore, for FY 2019, in this final rule, we are not including the imputed floor (calculated under the original methodology and alternative methodology) in calculating the uniform, national rural floor budget neutrality adjustment, which is reflected in the FY 2019 wage index.

#### A. Calculation of the Adjusted Standardized Amount

##### 1. Standardization of Base-Year Costs or Target Amounts

In general, the national standardized amount is based on per discharge averages of adjusted hospital costs from a base period (section 1886(d)(2)(A) of the Act), updated and otherwise adjusted in accordance with the provisions of section 1886(d) of the Act. The September 1, 1983 interim final rule (48 FR 39763) contained a detailed explanation of how base-year cost data (from cost reporting periods ending during FY 1981) were established for urban and rural hospitals in the initial development of standardized amounts for the IPPS.

Sections 1886(d)(2)(B) and 1886(d)(2)(C) of the Act require us to update base-year per discharge costs for FY 1984 and then standardize the cost data in order to remove the effects of certain sources of cost variations among hospitals. These effects include case-mix, differences in area wage levels, cost-of-living adjustments for Alaska and Hawaii, IME costs, and costs to hospitals serving a disproportionate share of low-income patients.

For FY 2019, as we proposed, we are continuing to use the national labor-related and nonlabor-related shares (which are based on the 2014-based hospital market basket)

that were used in FY 2018. Specifically, under section 1886(d)(3)(E) of the Act, the Secretary estimates, from time to time, the proportion of payments that are labor-related and adjusts the proportion (as estimated by the Secretary from time to time) of hospitals' costs which are attributable to wages and wage-related costs of the DRG prospective payment rates. We refer to the proportion of hospitals' costs that are attributable to wages and wage-related costs as the "labor-related share." For FY 2019, as discussed in section III. of the preamble of this final rule, as we proposed, we are continuing to use a labor-related share of 68.3 percent for the national standardized amounts for all IPPS hospitals (including hospitals in Puerto Rico) that have a wage index value that is greater than 1.0000. Consistent with section 1886(d)(3)(E) of the Act, as we proposed, we applied the wage index to a labor-related share of 62 percent of the national standardized amount for all IPPS hospitals (including hospitals in Puerto Rico) whose wage index values are less than or equal to 1.0000.

The standardized amounts for operating costs appear in Tables 1A, 1B, and 1C that are listed and published in section VI. of the Addendum to this final rule and are available via the Internet on the CMS website.

## 2. Computing the National Average Standardized Amount

Section 1886(d)(3)(A)(iv)(II) of the Act requires that, beginning with FY 2004 and thereafter, an equal standardized amount be computed for all hospitals at the level computed for large urban hospitals during FY 2003, updated by the applicable percentage update. Accordingly, as we proposed, we calculated the FY 2019 national average

standardized amount irrespective of whether a hospital is located in an urban or rural location.

### 3. Updating the National Average Standardized Amount

Section 1886(b)(3)(B) of the Act specifies the applicable percentage increase used to update the standardized amount for payment for inpatient hospital operating costs. We note that, in compliance with section 404 of the MMA, in this final rule, as we proposed, we used the 2014-based IPPS operating and capital market baskets for FY 2019. As discussed in section IV.B. of the preamble of this final rule, in accordance with section 1886(b)(3)(B) of the Act, as amended by section 3401(a) of the Affordable Care Act, as we proposed, we reduced the FY 2019 applicable percentage increase (which for this final rule is based on IGI's second quarter 2018 forecast of the 2014-based IPPS market basket) by the MFP adjustment (the 10-year moving average of MFP for the period ending FY 2019) of 0.8 percentage point, which for this final rule is also calculated based on IGI's second quarter 2018 forecast.

In addition, in accordance with section 1886(b)(3)(B)(i) of the Act, as amended by sections 3401(a) and 10319(a) of the Affordable Care Act, as we proposed, we further updated the standardized amount for FY 2019 by the estimated market basket percentage increase less 0.75 percentage point for hospitals in all areas. Sections 1886(b)(3)(B)(xi) and (xii) of the Act, as added and amended by sections 3401(a) and 10319(a) of the Affordable Care Act, further state that these adjustments may result in the applicable percentage increase being less than zero. The percentage increase in the market basket

reflects the average change in the price of goods and services required as inputs to provide hospital inpatient services.

Based on IGI's 2018 second quarter forecast of the hospital market basket increase (as discussed in Appendix B of this final rule), the forecast of the hospital market basket increase for FY 2019 for this final rule is 2.9 percent. As discussed earlier, for FY 2019, depending on whether a hospital submits quality data under the rules established in accordance with section 1886(b)(3)(B)(viii) of the Act and is a meaningful EHR user under section 1886(b)(3)(B)(ix) of the Act, there are four possible applicable percentage increases that can be applied to the standardized amount. We refer readers to section IV.B. of the preamble of this final rule for a complete discussion on the FY 2019 inpatient hospital update to the standardized amount. We also refer readers to the table above for the four possible applicable percentage increases that will be applied to update the national standardized amount. The standardized amounts shown in Tables 1A through 1C that are published in section VI. of this Addendum and that are available via the Internet on the CMS website reflect these differential amounts.

Although the update factors for FY 2019 are set by law, we are required by section 1886(e)(4) of the Act to recommend, taking into account MedPAC's recommendations, appropriate update factors for FY 2019 for both IPPS hospitals and hospitals and hospital units excluded from the IPPS. Section 1886(e)(5)(A) of the Act requires that we publish our recommendations in the **Federal Register** for public comment. Our recommendation on the update factors is set forth in Appendix B of this final rule.

#### 4. Methodology for Calculation of the Average Standardized Amount

The methodology we used to calculate the FY 2019 standardized amount is as follows:

- To ensure we are only including hospitals paid under the IPPS in the calculation of the standardized amount, we applied the following inclusion and exclusion criteria: include hospitals whose last four digits fall between 0001 and 0879 (section 2779A1 of Chapter 2 of the State Operations Manual on the CMS website at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107c02.pdf>); exclude CAHs at the time of this proposed rule; exclude hospitals in Maryland (because these hospitals are paid under an all payer model under section 1115A of the Act); and remove PPS-excluded cancer hospitals that have a “V” in the fifth position of their provider number or a “E” or “F” in the sixth position.
- As in the past, as we proposed, we adjusted the FY 2019 standardized amount to remove the effects of the FY 2018 geographic reclassifications and outlier payments before applying the FY 2019 updates. We then applied budget neutrality offsets for outliers and geographic reclassifications to the standardized amount based on FY 2019 payment policies.
- We do not remove the prior year’s budget neutrality adjustments for reclassification and recalibration of the DRG relative weights and for updated wage data because, in accordance with sections 1886(d)(4)(C)(iii) and 1886(d)(3)(E) of the Act, estimated aggregate payments after updates in the DRG relative weights and wage index

should equal estimated aggregate payments prior to the changes. If we removed the prior year's adjustment, we would not satisfy these conditions.

Budget neutrality is determined by comparing aggregate IPPS payments before and after making changes that are required to be budget neutral (for example, changes to MS-DRG classifications, recalibration of the MS-DRG relative weights, updates to the wage index, and different geographic reclassifications). We include outlier payments in the simulations because they may be affected by changes in these parameters.

- Consistent with our methodology established in the FY 2011 IPPS/LTCH PPS final rule (75 FR 50422 through 50433), because IME Medicare Advantage payments are made to IPPS hospitals under section 1886(d) of the Act, we believe these payments must be part of these budget neutrality calculations. However, we note that it is not necessary to include Medicare Advantage IME payments in the outlier threshold calculation or the outlier offset to the standardized amount because the statute requires that outlier payments be not less than 5 percent nor more than 6 percent of total “operating DRG payments,” which does not include IME and DSH payments. We refer readers to the FY 2011 IPPS/LTCH PPS final rule for a complete discussion on our methodology of identifying and adding the total Medicare Advantage IME payment amount to the budget neutrality adjustments.

- Consistent with the methodology in the FY 2012 IPPS/LTCH PPS final rule, in order to ensure that we capture only fee-for-service claims, we are only including claims with a “Claim Type” of 60 (which is a field on the MedPAR file that indicates a claim is an FFS claim).

- Consistent with our methodology established in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57277), in order to further ensure that we capture only FFS claims, we are excluding claims with a “GHOPAID” indicator of 1 (which is a field on the MedPAR file that indicates a claim is not an FFS claim and is paid by a Group Health Organization).

- Consistent with our methodology established in the FY 2011 IPPS/LTCH PPS final rule (75 FR 50422 through 50423), we examine the MedPAR file and remove pharmacy charges for anti-hemophilic blood factor (which are paid separately under the IPPS) with an indicator of “3” for blood clotting with a revenue code of “0636” from the covered charge field for the budget neutrality adjustments. We also remove organ acquisition charges from the covered charge field for the budget neutrality adjustments because organ acquisition is a pass-through payment not paid under the IPPS.

- For FY 2019, the Bundled Payments for Care Improvement (BPCI) Initiative will have ended and a new model, the BPCI Advanced model will have begun. The BPCI Advanced model, tested under the authority of section 3021 of the Affordable Care Act (codified at section 1115A of the Act), is comprised of a single payment and risk track, which bundles payments for multiple services beneficiaries receive during a Clinical Episode. Acute care hospitals may participate in the BPCI Advanced model in one of two capacities: as a model Participant or as a downstream Episode Initiator. Regardless of the capacity in which they participate in the BPCI Advanced model, participating acute care hospitals will continue to receive IPPS payments under section 1886(d) of the Act. Acute care hospitals that are Participants also assume financial and

quality performance accountability for Clinical Episodes in the form of a reconciliation payment. For additional information on the BPCI Advanced model, we refer readers to the BPCI Advanced webpage on the CMS Center for Medicare and Medicaid Innovation's website at: <https://innovation.cms.gov/initiatives/bpci-advanced/>.

In the FY 2013 IPPS/LTCH PPS final rule (77 FR 53341 through 53343), for FY 2013 and subsequent fiscal years, we finalized a methodology to treat hospitals that participate in the BPCI Initiative the same as prior fiscal years for the IPPS payment modeling and ratesetting process (which includes recalibration of the MS-DRG relative weights, ratesetting, calculation of the budget neutrality factors, and the impact analysis) without regard to a hospital's participation within these bundled payment models (that is, as if they are not participating in those models under the BPCI initiative). For FY 2019, consistent with how we have treated hospitals that participated in the BPCI Initiative, as we proposed, we are including all applicable data from subsection (d) hospitals participating in the BPCI Advanced model in our IPPS payment modeling and ratesetting calculations. We believe it is appropriate to include all applicable data from the subsection (d) hospitals participating in the BPCI Advanced model in our IPPS payment modeling and ratesetting calculations because these hospitals are still receiving IPPS payments under section 1886(d) of the Act.

- Consistent with our methodology established in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53687 through 53688), we believe that it is appropriate to include adjustments for the Hospital Readmissions Reduction Program and the Hospital VBP

Program (established under the Affordable Care Act) within our budget neutrality calculations.

Both the hospital readmissions payment adjustment (reduction) and the hospital VBP payment adjustment (redistribution) are applied on a claim-by-claim basis by adjusting, as applicable, the base-operating DRG payment amount for individual subsection (d) hospitals, which affects the overall sum of aggregate payments on each side of the comparison within the budget neutrality calculations.

In order to properly determine aggregate payments on each side of the comparison, consistent with the approach we have taken in prior years, for FY 2019 and subsequent years, as we proposed, we are continuing to apply a proxy hospital readmissions payment adjustment and a proxy hospital VBP payment adjustment on each side of the comparison, consistent with the methodology that we adopted in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53687 through 53688). That is, we applied a proxy readmissions payment adjustment factor and a proxy hospital VBP payment adjustment factor on both sides of our comparison of aggregate payments when determining all budget neutrality factors described in section II.A.4. of this Addendum.

For the purpose of calculating the proxy FY 2019 readmissions payment adjustment factors, for both the proposed rule and this final rule, as discussed in section IV.H. of the preamble of this final rule, as we proposed, we used the proportion of dually-eligible Medicare beneficiaries, excess readmission ratios, and aggregate payments for excess readmissions from the prior fiscal year's applicable period because, at the time of the development of the final rule, hospitals have not yet had the opportunity to review

and correct the data (program calculations based on the FY 2019 applicable period of July 1, 2014 to June 30, 2017) before the data are made public under our policy regarding the reporting of hospital-specific readmission rates, consistent with section 1886(q)(6) of the Act. (For additional information on our general policy for the reporting of hospital-specific readmission rates, consistent with section 1886(q)(6) of the Act, we refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53399 through 53400) and section IV.H. of the preamble of this final rule.)

In addition, for FY 2019, for the purpose of modeling aggregate payments when determining all budget neutrality factors, as we proposed, we used proxy hospital VBP payment adjustment factors for FY 2019 that are based on data from a historical period because hospitals have not yet had an opportunity to review and submit corrections for their data from the FY 2019 performance period. (For additional information on our policy regarding the review and correction of hospital-specific measure rates under the Hospital VBP Program, consistent with section 1886(o)(10)(A)(ii) of the Act, we refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53578 through 53581), the CY 2012 OPPI/ASC final rule with comment period (76 FR 74544 through 74547), and the Hospital Inpatient VBP final rule (76 FR 26534 through 26536).)

- The Affordable Care Act also established section 1886(r) of the Act, which modifies the methodology for computing the Medicare DSH payment adjustment beginning in FY 2014. Beginning in FY 2014, IPPS hospitals receiving Medicare DSH payment adjustments receive an empirically justified Medicare DSH payment equal to 25 percent of the amount that would previously have been received under the statutory

formula set forth under section 1886(d)(5)(F) of the Act governing the Medicare DSH payment adjustment. In accordance with section 1886(r)(2) of the Act, the remaining amount, equal to an estimate of 75 percent of what otherwise would have been paid as Medicare DSH payments, reduced to reflect changes in the percentage of individuals who are uninsured and an additional statutory adjustment, will be available to make additional payments to Medicare DSH hospitals based on their share of the total amount of uncompensated care reported by Medicare DSH hospitals for a given time period. In order to properly determine aggregate payments on each side of the comparison for budget neutrality, prior to FY 2014, we included estimated Medicare DSH payments on both sides of our comparison of aggregate payments when determining all budget neutrality factors described in section II.A.4. of this Addendum.

To do this for FY 2019 (as we did for the last 5 fiscal years), as we proposed, we included estimated empirically justified Medicare DSH payments that will be paid in accordance with section 1886(r)(1) of the Act and estimates of the additional uncompensated care payments made to hospitals receiving Medicare DSH payment adjustments as described by section 1886(r)(2) of the Act. That is, we considered estimated empirically justified Medicare DSH payments at 25 percent of what would otherwise have been paid, and also the estimated additional uncompensated care payments for hospitals receiving Medicare DSH payment adjustments on both sides of our comparison of aggregate payments when determining all budget neutrality factors described in section II.A.4. of this Addendum.

- When calculating total payments for budget neutrality, to determine total payments for SCHs, we model total hospital-specific rate payments and total Federal rate payments and then include whichever one of the total payments is greater. As discussed in section IV.F. of the preamble to this final rule and below, as we proposed, we are continuing to use the FY 2014 finalized methodology under which we take into consideration uncompensated care payments in the comparison of payments under the Federal rate and the hospital-specific rate for SCHs. Therefore, we included estimated uncompensated care payments in this comparison.

Similarly, for MDHs, as discussed in section IV.F. of the preamble of this final rule, when computing payments under the Federal national rate plus 75 percent of the difference between the payments under the Federal national rate and the payments under the updated hospital-specific rate, as we proposed, we continued to take into consideration uncompensated care payments in the computation of payments under the Federal rate and the hospital-specific rate for MDHs.

- As we proposed, we include an adjustment to the standardized amount for those hospitals that are not meaningful EHR users in our modeling of aggregate payments for budget neutrality for FY 2019. Similar to FY 2018, we are including this adjustment based on data on the prior year's performance. Payments for hospitals will be estimated based on the applicable standardized amount in Tables 1A and 1B for discharges occurring in FY 2019.

- In our determination of all budget neutrality factors described in section II.A.4. of this Addendum, we used transfer-adjusted discharges. Specifically, we calculated the

transfer-adjusted discharges using the statutory expansion of the postacute care transfer policy to include discharges to hospice care by a hospice program as discussed in section IV.A.2.b. of the preamble of this final rule.

Comment: Based on their review of the rate information CMS made available with the proposed rule, a few commenters noted that there appeared to be an error in the determination of the hospital-specific payment rates for SCHs and MDHs that resulted in hospital-specific payment rates that are too low. These commenters urged CMS to carefully reexamine its calculations and correct the apparent error in the determination of hospital-specific payment rates.

Response: We appreciate these commenters' analysis and their bringing this to our attention. Upon review, we found that we inadvertently omitted the applicable FY 2013 factors needed to update the hospital-specific payment rates in the PSF from FY 2012 dollars. We have corrected this inadvertent omission in the determination of the hospital-specific payment rates used for this final rule.

a. Recalibration of MS-DRG Relative Weights

Section 1886(d)(4)(C)(iii) of the Act specifies that, beginning in FY 1991, the annual DRG reclassification and recalibration of the relative weights must be made in a manner that ensures that aggregate payments to hospitals are not affected. As discussed in section II.G. of the preamble of this final rule, we normalized the recalibrated MS-DRG relative weights by an adjustment factor so that the average case relative weight after recalibration is equal to the average case relative weight prior to recalibration. However, equating the average case relative weight after recalibration to

the average case relative weight before recalibration does not necessarily achieve budget neutrality with respect to aggregate payments to hospitals because payments to hospitals are affected by factors other than average case relative weight. Therefore, as we have done in past years, as we proposed, we are making a budget neutrality adjustment to ensure that the requirement of section 1886(d)(4)(C)(iii) of the Act is met.

For FY 2019, to comply with the requirement that MS-DRG reclassification and recalibration of the relative weights be budget neutral for the standardized amount and the hospital-specific rates, we used FY 2017 discharge data to simulate payments and compared the following:

- Aggregate payments using the FY 2018 labor-related share percentages, the FY 2018 relative weights, and the FY 2018 pre-reclassified wage data, and applied the FY 2019 hospital readmissions payment adjustments and estimated FY 2019 hospital VBP payment adjustments; and
- Aggregate payments using the FY 2018 labor-related share percentages, the FY 2019 relative weights, and the FY 2018 pre-reclassified wage data, and applied the FY 2019 hospital readmissions payment adjustments and estimated FY 2019 hospital VBP payment adjustments applied above. (We note that these FY 2019 relative weights reflect our temporary measure for FY 2019, as discussed in section II.G. of the preamble of this final rule, to set the FY 2019 relative weight at the FY 2018 final relative weight for MS-DRGs where the FY 2018 relative weight declined by 20 percent from the FY 2017 relative weight and the FY 2019 relative weight would have declined by 20 percent or more from the FY 2018 relative weight.)

Based on this comparison, we computed a budget neutrality adjustment factor equal to 0.997192 and applied this factor to the standardized amount. As discussed in section IV. of this Addendum, as we also proposed, we applied the MS-DRG reclassification and recalibration budget neutrality factor of 0.997192 to the hospital-specific rates that are effective for cost reporting periods beginning on or after October 1, 2018.

b. Updated Wage Index--Budget Neutrality Adjustment

Section 1886(d)(3)(E)(i) of the Act requires us to update the hospital wage index on an annual basis beginning October 1, 1993. This provision also requires us to make any updates or adjustments to the wage index in a manner that ensures that aggregate payments to hospitals are not affected by the change in the wage index. Section 1886(d)(3)(E)(i) of the Act requires that we implement the wage index adjustment in a budget neutral manner. However, section 1886(d)(3)(E)(ii) of the Act sets the labor-related share at 62 percent for hospitals with a wage index less than or equal to 1.0000, and section 1886(d)(3)(E)(i) of the Act provides that the Secretary shall calculate the budget neutrality adjustment for the adjustments or updates made under that provision as if section 1886(d)(3)(E)(ii) of the Act had not been enacted. In other words, this section of the statute requires that we implement the updates to the wage index in a budget neutral manner, but that our budget neutrality adjustment should not take into account the requirement that we set the labor-related share for hospitals with wage indexes less than or equal to 1.0000 at the more advantageous level of 62 percent. Therefore, for purposes of this budget neutrality adjustment, section 1886(d)(3)(E)(i) of

the Act prohibits us from taking into account the fact that hospitals with a wage index less than or equal to 1.0000 are paid using a labor-related share of 62 percent. Consistent with current policy, for FY 2019, as we proposed, we are adjusting 100 percent of the wage index factor for occupational mix. We describe the occupational mix adjustment in section III.E. of the preamble of this final rule.

To compute a budget neutrality adjustment factor for wage index and labor-related share percentage changes, we used FY 2017 discharge data to simulate payments and compared the following:

- Aggregate payments using the FY 2019 relative weights and the FY 2018 pre-reclassified wage indexes, applied the FY 2018 labor-related share of 68.3 percent to all hospitals (regardless of whether the hospital's wage index was above or below 1.0000), and applied the FY 2019 hospital readmissions payment adjustment and the estimated FY 2019 hospital VBP payment adjustment; and
- Aggregate payments using the FY 2019 relative weights and the FY 2019 pre-reclassified wage indexes, applied the labor-related share for FY 2019 of 68.3 percent to all hospitals (regardless of whether the hospital's wage index was above or below 1.0000), and applied the same FY 2019 hospital readmissions payment adjustments and estimated FY 2019 hospital VBP payment adjustments applied above.

In addition, we applied the MS-DRG reclassification and recalibration budget neutrality adjustment factor (derived in the first step) to the payment rates that were used to simulate payments for this comparison of aggregate payments from FY 2018 to

FY 2019. By applying this methodology, we determined a budget neutrality adjustment factor of 1.000748 for changes to the wage index.

c. Reclassified Hospitals—Budget Neutrality Adjustment

Section 1886(d)(8)(B) of the Act provides that certain rural hospitals are deemed urban. In addition, section 1886(d)(10) of the Act provides for the reclassification of hospitals based on determinations by the MGCRB. Under section 1886(d)(10) of the Act, a hospital may be reclassified for purposes of the wage index.

Under section 1886(d)(8)(D) of the Act, the Secretary is required to adjust the standardized amount to ensure that aggregate payments under the IPPS after implementation of the provisions of sections 1886(d)(8)(B) and (C) and 1886(d)(10) of the Act are equal to the aggregate prospective payments that would have been made absent these provisions. We note that the wage index adjustments provided for under section 1886(d)(13) of the Act are not budget neutral. Section 1886(d)(13)(H) of the Act provides that any increase in a wage index under section 1886(d)(13) shall not be taken into account in applying any budget neutrality adjustment with respect to such index under section 1886(d)(8)(D) of the Act. To calculate the budget neutrality adjustment factor for FY 2019, we used FY 2017 discharge data to simulate payments and compared the following:

- Aggregate payments using the FY 2019 labor-related share percentages, the FY 2019 relative weights, and the FY 2019 wage data prior to any reclassifications under sections 1886(d)(8)(B) and (C) and 1886(d)(10) of the Act, and applied the FY 2019

hospital readmissions payment adjustments and the estimated FY 2019 hospital VBP payment adjustments; and

- Aggregate payments using the FY 2019 labor-related share percentages, the FY 2019 relative weights, and the FY 2019 wage data after such reclassifications, and applied the same FY 2019 hospital readmissions payment adjustments and the estimated FY 2019 hospital VBP payment adjustments applied above.

We note that the reclassifications applied under the second simulation and comparison are those listed in Table 2 associated with this final rule, which is available via the Internet on the CMS website. This table reflects reclassification crosswalks for FY 2019, and applies the policies explained in section III. of the preamble of this final rule. Based on these simulations, we calculated a budget neutrality adjustment factor of 0.985932 to ensure that the effects of these provisions are budget neutral, consistent with the statute.

The FY 2019 budget neutrality adjustment factor was applied to the standardized amount after removing the effects of the FY 2018 budget neutrality adjustment factor. We note that the FY 2019 budget neutrality adjustment reflects FY 2019 wage index reclassifications approved by the MGCRB or the Administrator at the time of development of this final rule.

#### d. Rural Floor Budget Neutrality Adjustment

Under § 412.64(e)(4), we make an adjustment to the wage index to ensure that aggregate payments after implementation of the rural floor under section 4410 of the BBA (Pub. L. 105–33) is equal to the aggregate prospective payments that would have

been made in the absence of this provision. Consistent with section 3141 of the Affordable Care Act and as discussed in section III.G. of the preamble of this final rule and codified at § 412.64(e)(4)(ii), the budget neutrality adjustment for the rural floor is a national adjustment to the wage index.

As noted above and as discussed in section III.G.2. of the preamble of this final rule, the imputed floor is set to expire effective October 1, 2018, and as we proposed, we are not extending the imputed floor policy.

Similar to our calculation in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50369 through 50370), for FY 2019, as we proposed, we are calculating a national rural Puerto Rico wage index. Because there are no rural Puerto Rico hospitals with established wage data, our calculation of the FY 2019 rural Puerto Rico wage index is based on the policy adopted in the FY 2008 IPPS final rule with comment period (72 FR 47323). That is, we used the unweighted average of the wage indexes from all CBSAs (urban areas) that are contiguous (share a border with) to the rural counties to compute the rural floor (72 FR 47323; 76 FR 51594). Under the OMB labor market area delineations, except for Arecibo, Puerto Rico (CBSA 11640), all other Puerto Rico urban areas are contiguous to a rural area. Therefore, based on our existing policy, the FY 2019 rural Puerto Rico wage index is calculated based on the average of the FY 2019 wage indexes for the following urban areas: Aguadilla-Isabela, PR (CBSA 10380); Guayama, PR (CBSA 25020); Mayaguez, PR (CBSA 32420); Ponce, PR (CBSA 38660); San German, PR (CBSA 41900); and San Juan-Carolina-Caguas, PR (CBSA 41980).

To calculate the national rural floor budget neutrality adjustment factor, we used FY 2017 discharge data to simulate payments and the post-reclassified national wage indexes and compared the following:

- National simulated payments without the national rural floor; and
- National simulated payments with the national rural floor.

Based on this comparison, we determined a national rural floor budget neutrality adjustment factor of 0.993142. The national adjustment was applied to the national wage indexes to produce a national rural floor budget neutral wage index.

e. Rural Community Hospital Demonstration Program Adjustment

In section IV.L. of the preamble of this final rule, we discuss the Rural Community Hospital Demonstration program, which was originally authorized for a 5-year period by section 410A of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) (Pub. L. 108-173), and extended for another 5-year period by sections 3123 and 10313 of the Affordable Care Act (Pub. L. 111-148). Subsequently, section 15003 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), enacted December 13, 2016, amended section 410A of Pub. L. 108-173 to require a 10-year extension period (in place of the 5-year extension required by the Affordable Care Act, as further discussed below). We make an adjustment to the standardized amount to ensure the effects of the Rural Community Hospital Demonstration program are budget neutral as required under section 410A(c)(2) of Pub. L. 108-173. We refer the reader to section IV.L. of the preamble of this final rule for complete details regarding the Rural Community Hospital Demonstration.

With regard to budget neutrality, as mentioned earlier, we make an adjustment to the standardized amount to ensure the effects of the Rural Community Hospital Demonstration are budget neutral, as required under section 410A(c)(2) of Pub. L. 108-173. For FY 2019, the total amount that we are applying to make an adjustment to the standardized amounts to ensure the effects of the Rural Community Hospital Demonstration program are budget neutral is \$58,129,609. Accordingly, using the most recent data available to account for the estimated costs of the demonstration program, for FY 2019, we computed a factor of 0.999467 for the Rural Community Hospital Demonstration budget neutrality adjustment that will be applied to the IPPS standard Federal payment rate. We refer readers to section IV.L. of the preamble of this final rule on complete details regarding the calculation of the amount we are applying to make an adjustment to the standardized amount.

We note that, as discussed in section IV.L. of the preamble of this final rule, as we proposed, we used updated data to the extent appropriate to determine the budget neutrality offset amount for FY 2019. We refer readers to section IV.L. of the preamble of this final rule on complete details regarding the availability of additional data prior to the FY 2019 IPPS/LTCH PPS final rule.

f. Adjustment for FY 2019 Required under Section 414 of Pub. L. 114-10 (MACRA)

As stated in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56785), once the recoupment required under section 631 of the ATRA was complete, we had anticipated making a single positive adjustment in FY 2018 to offset the reductions required to recoup the \$11 billion under section 631 of the ATRA. However, section 414 of the

MACRA (which was enacted on April 16, 2015) replaced the single positive adjustment we intended to make in FY 2018 with a 0.5 percent positive adjustment for each of FYs 2018 through 2023. (As noted in the FY 2018 IPPS/LTCH PPS proposed and final rules, section 15005 of the 21<sup>st</sup> Century Cures Act (Pub. L. 114-255), which was enacted December 13, 2016, reduced the adjustment for FY 2018 from 0.5 percentage points to 0.4588 percentage points.) Therefore, for FY 2019, as we proposed, we are implementing the required +0.5 percent adjustment to the standardized amount. This is a permanent adjustment to the payment rates.

g. Outlier Payments

Section 1886(d)(5)(A) of the Act provides for payments in addition to the basic prospective payments for “outlier” cases involving extraordinarily high costs. To qualify for outlier payments, a case must have costs greater than the sum of the prospective payment rate for the MS-DRG, any IME and DSH payments, uncompensated care payments, any new technology add-on payments, and the “outlier threshold” or “fixed-loss” amount (a dollar amount by which the costs of a case must exceed payments in order to qualify for an outlier payment). We refer to the sum of the prospective payment rate for the MS-DRG, any IME and DSH payments, uncompensated care payments, any new technology add-on payments, and the outlier threshold as the outlier “fixed-loss cost threshold.” To determine whether the costs of a case exceed the fixed-loss cost threshold, a hospital’s CCR is applied to the total covered charges for the case to convert the charges to estimated costs. Payments for eligible cases are then made based on a marginal cost factor, which is a percentage of the estimated costs above the

fixed-loss cost threshold. The marginal cost factor for FY 2019 is 80 percent, or 90 percent for burn MS-DRGs 927, 928, 929, 933, 934 and 935. We have used a marginal cost factor of 90 percent since FY 1989 (54 FR 36479 through 36480) for designated burn DRGs as well as a marginal cost factor of 80 percent for all other DRGs since FY 1995 (59 FR 45367).

In accordance with section 1886(d)(5)(A)(iv) of the Act, outlier payments for any year are projected to be not less than 5 percent nor more than 6 percent of total operating DRG payments (which does not include IME and DSH payments) plus outlier payments. When setting the outlier threshold, we compute the 5.1 percent target by dividing the total operating outlier payments by the total operating DRG payments plus outlier payments. We do not include any other payments such as IME and DSH within the outlier target amount. Therefore, it is not necessary to include Medicare Advantage IME payments in the outlier threshold calculation. Section 1886(d)(3)(B) of the Act requires the Secretary to reduce the average standardized amount by a factor to account for the estimated proportion of total DRG payments made to outlier cases. More information on outlier payments may be found on the CMS website at:

<http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/outlier.htm>.

(1) FY 2019 Outlier Fixed-Loss Cost Threshold

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50977 through 50983), in response to public comments on the FY 2013 IPPS/LTCH PPS proposed rule, we made changes to our methodology for projecting the outlier fixed-loss cost threshold for

FY 2014. We refer readers to the FY 2014 IPPS/LTCH PPS final rule for a detailed discussion of the changes.

As we have done in the past, to calculate the FY 2019 outlier threshold, we simulated payments by applying FY 2019 payment rates and policies using cases from the FY 2017 MedPAR file. As noted in section II.C. of this Addendum, we specify the formula used for actual claim payment which is also used by CMS to project the outlier threshold for the upcoming fiscal year. The difference is the source of some of the variables in the formula. For example, operating and capital CCRs for actual claim payment are from the PSF while CMS uses an adjusted CCR (as described below) to project the threshold for the upcoming fiscal year. In addition, charges for a claim payment are from the bill while charges to project the threshold are from the MedPAR data with an inflation factor applied to the charges (as described earlier).

In order to determine the FY 2019 outlier threshold, we inflated the charges on the MedPAR claims by 2 years, from FY 2017 to FY 2019. As discussed in the FY 2015 IPPS/LTCH PPS final rule, we believe a methodology that is based on 1-year of charge data will provide a more stable measure to project the average charge per case because our prior methodology used a 6-month measure, which inherently uses fewer claims than a 1-year measure and makes it more susceptible to fluctuations in the average charge per case as a result of any significant charge increases or decreases by hospitals. As finalized in the FY 2017 IPPS/LTCH PPS final rule (81 FR 57282), we are using the following methodology to calculate the charge inflation factor for FY 2019:

- To produce the most stable measure of charge inflation, we applied the following inclusion and exclusion criteria of hospitals claims in our measure of charge inflation: include hospitals whose last four digits fall between 0001 and 0899 (section 2779A1 of Chapter 2 of the State Operations Manual on the CMS website at <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107c02.pdf>); include CAHs that were IPPS hospitals for the time period of the MedPAR data being used to calculate the charge inflation factor; include hospitals in Maryland; and remove PPS-excluded cancer hospitals who have a “V” in the fifth position of their provider number or a “E” or “F” in the sixth position.

- We excluded Medicare Advantage IME claims for the reasons described in section I.A.4. of this Addendum. We refer readers to the FY 2011 IPPS/LTCH PPS final rule for a complete discussion on our methodology of identifying and adding the total Medicare Advantage IME payment amount to the budget neutrality adjustments.

- In order to ensure that we capture only FFS claims, we included claims with a “Claim Type” of 60 (which is a field on the MedPAR file that indicates a claim is an FFS claim).

- In order to further ensure that we capture only FFS claims, we excluded claims with a “GHOPAID” indicator of 1 (which is a field on the MedPAR file that indicates a claim is not an FFS claim and is paid by a Group Health Organization).

- We examined the MedPAR file and removed pharmacy charges for anti-hemophilic blood factor (which are paid separately under the IPPS) with an indicator

of “3” for blood clotting with a revenue code of “0636” from the covered charge field.

We also removed organ acquisition charges from the covered charge field because organ acquisition is a pass-through payment not paid under the IPPS.

In the FY 2016 IPPS/LTCH PPS final rule (80 FR 49779 through 49780), we stated that commenters were concerned that they were unable to replicate the calculation of the charge inflation factor that CMS used in the proposed rule. In response to those comments, we stated that we continue to believe that it is optimal to use the most recent period of charge data available to measure charge inflation. In response to those comments, similar to FY 2016, FY 2017, and FY 2018, for FY 2019, we grouped claims data by quarter in the table below in order that the public would be able to replicate the claims summary for the claims with discharge dates through September 30, 2017, that are available under the current limited data set (LDS) structure. In order to provide even more information in response to the commenters’ request, similar to FY 2016, FY 2017, and FY 2018, for FY 2019, we made available on the CMS website at:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service->

[Payment/AcuteInpatientPPS/index.html](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html) (click on the links on the left titled “FY 2019 IPPS Proposed Rule Home Page” and then click the link “FY 2019 Proposed Rule Data Files”) more detailed summary tables by provider with the monthly charges that were used to compute the charge inflation factor. In the proposed rule, we stated that we continue to work with our systems teams and privacy office to explore expanding the information available in the current LDS, perhaps through the provision of a supplemental data file for future rulemaking.

<b>Quarter</b>	<b>Covered Charges (January 1, 2016, through December 31, 2016)</b>	<b>Cases (January 1, 2016, through December 31, 2016)</b>	<b>Covered Charges (January 1, 2017, through December 31, 2017)</b>	<b>Cases (January 1, 2017, through December 31, 2017)</b>
1	\$140,753,065,878	2,506,525	\$149,358,509,178	2,551,065
2	135,409,469,345	2,414,710	140,445,911,726	2,397,110
3	132,239,610,957	2,356,131	135,004,161,478	2,293,958
4	138,440,787,173	2,412,708	108,175,925,297	1,821,225
<b>Total</b>	<b>546,842,933,353</b>	<b>9,690,074</b>	<b>532,984,507,679</b>	<b>9,063,358</b>

Under this methodology, to compute the 1-year average annualized rate-of-change in charges per case for FY 2019, we compared the average covered charge per case of \$56,433 ( $\$546,842,933,353/9,690,074$ ) from the second quarter of FY 2016 through the first quarter of FY 2017 (January 1, 2016, through December 31, 2016) to the average covered charge per case of \$58,806.52 ( $\$532,984,507,679/9,063,358$ ) from the second quarter of FY 2017 through the first quarter of FY 2018 (January 1, 2017, through December 31, 2017). This rate-of-change was 4.2 percent (1.04205) or 8.6 percent (1.085868) over 2 years. (We note that in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20581) we inadvertently stated the rate-of-change over 2 years as 9.5 percent instead of 8.6 percent. However, the factor in the parenthetical, 1.085868, was shown correctly.) The billed charges are obtained from the claim from the MedPAR file and inflated by the inflation factor specified above.

Comment: Several commenters were concerned with what they stated was a lack of transparency with respect to the charge inflation component of the fixed-loss threshold calculation. The commenters concluded that, in the absence of access to the data or more

specific data and information about how CMS arrived at the totals used in the charge inflation calculation, their ability to comment is limited. Several commenters requested that CMS add the claims data used to compute the charge inflation factor to the list of limited data set (LDS) files that can be ordered through the usual LDS data request process.

Another commenter stated that it was unable to match the figures in the table from the proposed rule with publicly available data sources and that CMS did not disclose the source of the data. The commenter further stated that CMS has not made the necessary data available, or any guidance that describes whether and how CMS edited such data to arrive at the total of quarterly charges and charges per case used to measure charge inflation. Consequently, the commenter stated that the table provided in the proposed rule was not useful in assessing the accuracy of the charge inflation figure that CMS used in the proposed rule to calculate the outlier threshold. The commenter noted that CMS provided a detailed summary table by provider with the monthly charges that were used to compute the charge inflation factor. The commenters appreciated the additional data, but still believed that CMS had not provided enough specific information and data to allow the underlying numbers used in CMS' calculation of the charge inflation factor to be replicated and/or tested for accuracy.

Response: We responded to a similar comment in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50375), the FY 2016 IPPS/LTCH PPS final rule (80 FR 49779 through 49780), the FY 2017 IPPS/LTCH PPS final rule (81 FR 57283), and the FY 2018 IPPS/LTCH PPS final rule (82 FR 38524) and refer readers to those final rules for our

complete response. We have not yet been able to restructure the files (such as ensuring that personal identification information is compliant with privacy regulations) for release with the publication of the proposed rule and this final rule. As we stated in last year's final rule and prior rulemaking, while the charge data may not be immediately available after the issuance of this final rule, we believe the data and supporting files we have provided do provide the commenters with additional information that can be verified once the charge data are available. We have produced the actual figures we used and disclosed our formula. We intend to post the actual charge data as soon as possible so that the public can verify the raw data with the figures we used in the calculation. As stated earlier and in the proposed rule, the charge data used to calculate the charge inflation factor are sourced from our MedPAR database. In addition, as stated in the FY 2018 final rule and prior rulemaking, for this final rule we continue to believe that it is optimal to use the most recent period of charge data available to measure charge inflation. Similar to FY 2018, the commenters did not recommend using charge data from a different period to compute the charge inflation factor. If we computed the charge inflation factor using the latest data available to the public at the time of issuance of this final rule, we would need to compare charge data from FY 2016 (October 2015 through September 2016) to FY 2017 (October 2016 through September 2017), data which would be at least 10 months old compared to the charge data we use for the final rule under our current approach, which are 4 months old.

With respect to those comments requesting that CMS add the claims data used to compute the charge inflation factor to the list of LDS files that can be ordered through the

usual LDS data request process, we note that the commenters' views were similar to comments received and we responded to in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38524 through 38525) and the FY 2016 IPPS/LTCH PPS final rule (80 FR 49779 through 49780), and we refer readers to those rules for additional details our response. As we stated in response to a similar comment in last year's final rule (82 FR 38525), there are limitations on how expeditiously we can add the charge data to the LDS, and we do not anticipate being able to provide the charge data we currently use to calculate the charge inflation factor within the commenters' requested timeframe. We continue to be confronted with the dilemma of either using older data that commenters can access earlier, or using the most up-to-date data which will be more accurate, but will not be available to the public until after publication of the proposed and final rules. We again invite commenters to inform us if they believe their need to have complete access to the data we use in our methodology outweighs the greater accuracy provided by the use of more up-to-date data. We continue to prefer using the latest data available at the time of the proposed and final rules to compute the charge inflation factor because we believe it leads to greater accuracy in the calculation of the fixed-loss cost outlier threshold. However, for the FY 2020 IPPS/LTCH PPS proposed rule, we are continuing to consider using data that commenters can access earlier.

For these reasons, we disagree that CMS has not provided adequate information to allow for meaningful comment, and continue to believe that our current methodology is the most appropriate way to measure charge inflation to result in the most accurate calculation of the outlier threshold based on the best available data.

As we have done in the past, in the FY 2019 IPPS/LTCH PPS proposed rule (8 FR 20581), we proposed to establish the proposed FY 2019 outlier threshold using hospital CCRs from the December 2017 update to the Provider-Specific File (PSF)--the most recent available data at the time of the development of that proposed rule. We proposed to apply the following edits to providers' CCRs in the PSF. We believe these edits are appropriate in order to accurately model the outlier threshold. We first search for Indian Health Service providers and those providers assigned the statewide average CCR from the current fiscal year. We then replace these CCRs with the statewide average CCR for the upcoming fiscal year. We also assign the statewide average CCR (for the upcoming fiscal year) to those providers that have no value in the CCR field in the PSF or whose CCRs exceed the ceilings described later in this section (3.0 standard deviations from the mean of the log distribution of CCRs for all hospitals). We do not apply the adjustment factors described below to hospitals assigned the statewide average CCR. For FY 2019, we also proposed to continue to apply an adjustment factor to the CCRs to account for cost and charge inflation (as explained below). In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20581), we also proposed that, if more recent data become available, we would use that data to calculate the final FY 2019 outlier threshold.

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50979), we adopted a new methodology to adjust the CCRs. Specifically, we finalized a policy to compare the national average case-weighted operating and capital CCR from the most recent update of the PSF to the national average case-weighted operating and capital CCR from the same period of the prior year.

Therefore, as we have done since FY 2014, we proposed to adjust the CCRs from the December 2017 update of the PSF by comparing the percentage change in the national average case-weighted operating CCR and capital CCR from the December 2016 update of the PSF to the national average case-weighted operating CCR and capital CCR from the December 2017 update of the PSF. We note that, in the proposed rule, we used total transfer-adjusted cases from FY 2017 to determine the national average case-weighted CCRs for both sides of the comparison. As stated in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50979), we believe that it is appropriate to use the same case count on both sides of the comparison because this will produce the true percentage change in the average case-weighted operating and capital CCR from one year to the next without any effect from a change in case count on different sides of the comparison.

Using the proposed methodology above, for the proposed rule, we calculated a proposed December 2016 operating national average case-weighted CCR of 0.266065 and a proposed December 2017 operating national average case-weighted CCR of 0.262830. We then calculated the percentage change between the two national operating case-weighted CCRs by subtracting the December 2016 operating national average case-weighted CCR from the December 2017 operating national average case-weighted CCR and then dividing the result by the December 2016 national operating average case-weighted CCR. This resulted in a proposed national operating CCR adjustment factor of 0.987842.

We used the same methodology proposed above to adjust the capital CCRs. Specifically, we calculated a December 2016 capital national average case-weighted CCR of 0.023104 and a December 2017 capital national average case-weighted CCR of 0.022076. We then calculated the percentage change between the two national capital case-weighted CCRs by subtracting the December 2016 capital national average case-weighted CCR from the December 2017 capital national average case-weighted CCR and then dividing the result by the December 2016 capital national average case-weighted CCR. This resulted in a proposed national capital CCR adjustment factor of 0.955517.

As discussed in section III.B.3. of the preamble of the FY 2011 IPPS/LTCH PPS final rule (75 FR 50160 and 50161) and in section III.G.3. of the preamble of this final rule, in accordance with section 10324(a) of the Affordable Care Act, we created a wage index floor of 1.0000 for all hospitals located in States determined to be frontier States. We note that the frontier State floor adjustments were applied after rural floor budget neutrality adjustments were applied for all labor market areas, in order to ensure that no hospital in a frontier State would receive a wage index less than 1.0000 due to the rural floor adjustment. In accordance with section 10324(a) of the Affordable Care Act, the frontier State adjustment will not be subject to budget neutrality, and will only be extended to hospitals geographically located within a frontier State. However, for purposes of estimating the outlier threshold for FY 2019, it was necessary to adjust the wage index of those eligible hospitals in a frontier State when calculating the outlier threshold that results in outlier payments being 5.1 percent of total payments for

FY 2019. If we did not take the above into account, our estimate of total FY 2019 payments would be too low, and, as a result, our outlier threshold would be too high, such that estimated outlier payments would be less than our projected 5.1 percent of total payments.

As we did in establishing the FY 2009 outlier threshold (73 FR 57891), in our projection of FY 2019 outlier payments, we proposed not to make any adjustments for the possibility that hospitals' CCRs and outlier payments may be reconciled upon cost report settlement. We continue to believe that, due to the policy implemented in the June 9, 2003 Outlier Final Rule (68 FR 34494), CCRs will no longer fluctuate significantly and, therefore, few hospitals will actually have these ratios reconciled upon cost report settlement. In addition, it is difficult to predict the specific hospitals that will have CCRs and outlier payments reconciled in any given year. We note that we have instructed MACs to identify for CMS any instances where: (1) a hospital's actual CCR for the cost reporting period fluctuates plus or minus 10 percentage points compared to the interim CCR used to calculate outlier payments when a bill is processed; and (2) the total outlier payments for the hospital exceeded \$500,000.00 for that period. Our simulations assume that CCRs accurately measure hospital costs based on information available to us at the time we set the outlier threshold. For these reasons, we proposed not to make any assumptions regarding the effects of reconciliation on the outlier threshold calculation.

Comment: Commenters expressed concern with CMS' decision not to consider outlier reconciliation in developing the outlier threshold and stated that CMS did not

provide any statistics or analysis concerning the number of hospitals that have been subjected to reconciliation and the amounts recovered during this process.

In addition to the cited resources received in previous iterations of this comment, one commenter referenced and provided an OIG report from September of 2017 (available on the website at: <https://oig.hhs.gov/oas/reports/region7/71402800.pdf>) focused on the reconciliation of outlier payments titled “Vulnerabilities Remain in Medicare Hospital Outlier Payments.” The commenter stated that CMS now has 15 full fiscal years of experience with reconciliation, from which to project the impact of its reconciliation in the upcoming fiscal year. The commenter noted that the amount of outlier payments subject to reconciliation does not appear to be de minimis. The commenter cited a 2012 OIG Report (available on the website at: <https://oig.hhs.gov/oas/reports/region7/71002764.pdf>) which identified approximately \$664 million in unreconciled outlier payments. Therefore, the commenter concluded that the impact of reconciliation that should not be ignored when setting the threshold. The commenter asserted that CMS’ policy of refusing to account for the impact of reconciliation in setting the FY 2019 outlier fixed-loss cost threshold is neither reasonable nor consistent with the outlier statute.

Response: The commenters’ views were similar to comments received and we responded to in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50979 to 509080) and the FY 2015 IPPS/LTCH PPS final rule (79 FR 50376 through 50377), and we refer readers to those rules for our responses. In the FY 2014 IPPS/LTCH PPS final rule, we stated that outlier reconciliation is a function of the cost report and Medicare contractors record

the outlier reconciliation amount on each provider's cost report. Therefore, as the MACs continue to perform these outlier reconciliations, they record these amounts on the cost report, which are then publicly available through the HCRIS database. Therefore, the outlier reconciliation data and information that the commenter requested should be publicly available through the cost report.

Outlier cases are, by definition, out of the ordinary, and the occurrence of an individual outlier case is not easily predicted. It is also difficult to predict their occurrence for each hospital in the country. This alone makes incorporating reconciliation into the modeling of the outlier threshold challenging and even more so when combined with the challenges of predicting not only outliers for use at hospital level, but which of those hospitals in the future will be reconciled. We note that the commenter did not specifically address how any projection of the impact of reconciliation would account for these issues, but we welcome recommendations or suggestions from the commenter or other members of the public based on the cost report data on how to account for reconciliation in the calculation of the outlier threshold. We intend to revisit this issue in next year's proposed rule as we continue to consider the feasibility of including outlier reconciliation in the modeling of the outlier threshold.

Lastly, we note that the \$664 million estimated figure from the OIG report was an aggregate estimate over an older 10-year period from 2002 to 2012 and was not a single year estimate. We note this to avoid any suggestion that if we were able to feasibly incorporate an estimate of outlier reconciliations in the modelling of the outlier threshold in future years, such an estimate would be of this magnitude.

Comment: One commenter cited CMS' response in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49781 and 49782) which stated in regard to the OIG's November 13, 2013 report (available on the website at: <https://oig.hhs.gov/oei/reports/oei-06-10-00520.pdf>) that "we note that the OIG report used CCRs from 2008-2011. The CCRs are updated in the PSF at the time the MAC tentatively settles the hospital cost report, which is approximately 6 to 7 months after the cost report has been submitted. \*\*\* Because hospitals typically increase their charges, over time CCRs will decrease but, due to the lag these lower CCRs will not be reflected in the PSF until the following tentative settlement. Thus, it is possible that the PSF will reflect CCRs that are similar for hospitals with high and low outlier payments. In addition, providers determine what they will charge for items, services, and procedures provided to patients, and these charges are the amount that the providers bill for an item, service, or procedure. Moreover, different hospitals can have similar lengths of stay but different CCRs. \*\*\* In addition, as the commenter noted, there are mechanisms to avoid outlier overpayments or underpayments as CMS and the MACs have the authority to specify an alternative CCR. Also, in addition to the examples cited by the commenter, as we note in every proposed and final rule, hospitals can also request alternative CCRs. Therefore, if hospitals make these requests, these CCRs would be reflected in the PSF which would be used to compute the fixed-loss threshold."

The commenter stated that this response infers that the findings from the 2013 OIG report (that high-outlier hospitals charge Medicare substantially more for the same MS-DRGs, even though their patients had similar lengths of stay as those in all other

hospitals) are no longer an area of concern because the report was based on CCRs from 2008 through 2011. The commenter stated that it conducted an analysis of the MedPAR data which concludes that the findings from the 2013 OIG Report have continued without interruption to present. The commenter also stated that CMS' response that providers may determine their charges overlooks section 2202.4.2 of the Provider Reimbursement Manual, Part I, Chapter 22, that provides that charges should reflect "the regular rates established by the provider for services rendered to both beneficiaries and to other paying patients," and they "should be related consistently to the cost of the services and uniformly applied to all patients whether inpatient or outpatient." The commenter asserted that CMS' failure to reconcile "high-outlier" payments effectively condones charging decisions based on maximizing outlier payments.

The commenter also cited CMS' statement from the FY 2015 IPPS/LTCH PPS final rule (79 FR 50377 and 50378) which stated "that the CCRs will reflect these low costs and high charges that the commenter referred to, and when applied to the charges on the claim will result in less outlier payments for such cases because the costs of the case will be lower when compared to the total MS-DRG payments excluding outlier payments." The commenter disagreed with this statement and cited the OIG's 2013 report. The commenter stated that the 2103 report revealed that "high-outlier hospitals charged Medicare substantially more for the same MS-DRGs, yet had similar average lengths of stay and CCRs," which the commenter asserted is directly opposite CMS' statement.

The commenter also asserted that it is neither consistent with the outlier statute nor reasonable for CMS, in modeling outlier payments for the upcoming fiscal year, to include outlier payments that were based on excessively high charges for particular MS-DRGs and not based on truly unusually high costs.

The commenter also asserted that CMS is fully authorized to reconcile the “high-outlier” payments and that according to its position in *Clarian Health v. Price*, No. 16-5307 (D.C. Cir.), all outlier payments are subject to reconciliation, regardless of whether they satisfy the reconciliation criteria. The commenter asserted that the discretion to subject all outlier payments to reconciliation is necessary to respond to hospitals, like those identified in the 2013 OIG Report, that seek to “inappropriately maximize outlier payments” by “operating just below the threshold to avoid detection.”

Response: It is challenging to evaluate the assertion regarding a possible current correlation between high outlier hospitals and hospital charges because the commenter provided no information regarding its analysis. Also, even if there is some degree of correlation between the two, it does not necessarily mean categorically that these hospitals are inappropriately charging for purposes of Medicare outlier payments. In the absence of audits and analysis of these hospitals, the commenter is incorrect in concluding from any degree of correlation that every high outlier hospital must have charges not relative to their costs.

We also note we simply indicated that providers determine what they will charge for items, services, and procedures provided to patients, and these charges are the amount that the providers bill for an item, service, or procedure. We never stated that providers

should disregard the PRM when setting those charges. Any assertion or suggestion that CMS condones hospitals inappropriately charging to maximize outlier payments is incorrect. In the June 9, 2003 final rule, we implemented the use of tentatively settled CCRs and the reconciliation policy directly in response to inappropriate charging. In addition, the PRM cited above states that charges should reflect “the regular rates established by the provider for services rendered to both beneficiaries and to other paying patients,” and they “should be related consistently to the cost of the services and uniformly applied to all patients whether inpatient or outpatient.” We expect hospitals to follow these guidelines and the manual when setting their charges.

With respect our statement from the FY 2015 IPPS/LTCH PPS final rule regarding CCRs, it is correct: CCRs will reflect low costs and high charges and, when applied to the charges on the claim, will result in less outlier payments because the costs of the case will be lower when compared to the total MS-DRG payments, excluding outlier payments. There are many factors that influence outlier payments. Consider a simplified example of two hospitals. One higher outlier hospital with average charges of \$100,000 and average costs of \$33,000 and a resulting CCR of 0.33, and another lower outlier hospital with average charges of \$60,000 and average costs of \$20,000 which also will result in a CCR of 0.33. As noted above, in the absence of audits and analysis of these hospitals, the commenter is incorrect in concluding from the fact that one hospital has higher charges and costs but the same CCR that the higher outlier hospital must have charges not relative to their costs. The higher outlier hospital may treat more resource

intensive patients, which would factor into the aggregate outlier payments the hospital receives. Length of stay is not an exclusive measure of resource intensity.

For similar reasons, the commenter is incorrect that the inclusion of hospitals with higher charges in our estimation of the outlier threshold means that we include “excessively high charges for particular MS-DRGs and not based on truly unusually high costs.”

We agree with the commenter that CMS has broad authority to reconcile outlier payments. However, we disagree that it is necessary to reconcile all outlier payments in order to address any individual circumstances where we believe reconciliation may be appropriate. As discussed in the June 9, 2003 Outlier Final Rule (68 FR 34503), we acknowledged the commenters’ concerns about the administrative costs associated with reprocessing and reconciling all inpatient claims and the desirability of limiting which hospitals’ outlier payments will be reconciled. Therefore, we agreed that any reconciliation of outlier payments should be done on a limited basis. As described in sections IV.H. and IV.I., respectively, of the preamble of this final rule, sections 1886(q) and 1886(o) of the Act establish the Hospital Readmissions Reduction Program and the Hospital VBP Program, respectively. We do not believe that it is appropriate to include the hospital VBP payment adjustments and the hospital readmissions payment adjustments in the outlier threshold calculation or the outlier offset to the standardized amount. Specifically, consistent with our definition of the base operating DRG payment amount for the Hospital Readmissions Reduction Program under § 412.152 and the Hospital VBP Program under § 412.160, outlier payments under section 1886(d)(5)(A) of

the Act are not affected by these payment adjustments. Therefore, outlier payments will continue to be calculated based on the unadjusted base DRG payment amount (as opposed to using the base-operating DRG payment amount adjusted by the hospital readmissions payment adjustment and the hospital VBP payment adjustment).

Consequently, we proposed to exclude the hospital VBP payment adjustments and the estimated hospital readmissions payment adjustments from the calculation of the outlier fixed-loss cost threshold.

We note that, to the extent section 1886(r) of the Act modifies the DSH payment methodology under section 1886(d)(5)(F) of the Act, the uncompensated care payment under section 1886(r)(2) of the Act, like the empirically justified Medicare DSH payment under section 1886(r)(1) of the Act, may be considered an amount payable under section 1886(d)(5)(F) of the Act such that it would be reasonable to include the payment in the outlier determination under section 1886(d)(5)(A) of the Act. As we have done since the implementation of uncompensated care payments in FY 2014, for FY 2019, we proposed allocating an estimated per-discharge uncompensated care payment amount to all cases for the hospitals eligible to receive the uncompensated care payment amount in the calculation of the outlier fixed-loss cost threshold methodology. We continue to believe that allocating an eligible hospital's estimated uncompensated care payment to all cases equally in the calculation of the outlier fixed-loss cost threshold would best approximate the amount we would pay in uncompensated care payments during the year because, when we make claim payments to a hospital eligible for such payments, we would be making estimated per-discharge uncompensated care payments to all cases equally.

Furthermore, we continue to believe that using the estimated per-claim uncompensated care payment amount to determine outlier estimates provides predictability as to the amount of uncompensated care payments included in the calculation of outlier payments. Therefore, consistent with the methodology used since FY 2014 to calculate the outlier fixed-loss cost threshold, for FY 2019, we proposed to include estimated FY 2019 uncompensated care payments in the computation of the outlier fixed-loss cost threshold. Specifically, we proposed to use the estimated per-discharge uncompensated care payments to hospitals eligible for the uncompensated care payment for all cases in the calculation of the outlier fixed-loss cost threshold methodology.

Using this methodology, we used the formula described in section I.C.1 of this Addendum to simulate and calculate the Federal payment rate and outlier payments for all claims. We proposed a threshold of \$27,545 and calculated total operating Federal payments of \$92,908,351,672 and total outlier payments of \$4,738,377,622. We then divided total outlier payments by total operating Federal payments plus total outlier payments and determined that this threshold met the 5.1 percent target. As a result, we proposed an outlier fixed-loss cost threshold for FY 2019 equal to the prospective payment rate for the MS-DRG, plus any IME, empirically justified Medicare DSH payments, estimated uncompensated care payment, and any add-on payments for new technology, plus \$27,545.

Comment: One commenter stated that, in the proposed rule, CMS indicated that it divided total outlier payments (\$4,738,377,622) by total operating Federal payments plus total outlier payments ( $\$92,908,351,672 + \$4,738,377,622$ ) to calculate the

Agency's 5.1 percent target. However, the commenter stated,  $\$4,738,377,622 / (\$92,908,351,672 + \$4,738,377,622)$  does not yield 5.1 percent. Instead, the commenter stated, it yields approximately 4.85 percent. The commenter added that, in fact, 5.1 percent is the quotient of  $\$4,738,377,622 / \$92,908,351,672$ . Thus, based on that description, the commenter stated that it appears that CMS has mistakenly based the proposed outlier threshold on outlier payments totaling only 4.85 percent and, consequently, set the proposed outlier threshold too high.

Response: The commenter is correct. We inadvertently referred to total operating payments of \$92,908,351,672 in the proposed rule, when that figure reflected the sum of total operating Federal payments and total outlier payments. The corrected total operating Federal payments for the proposed rule is \$88,169,974,050. Dividing the proposed total outlier payments of \$4,738,377,622 by the corrected proposed total operating Federal payments of \$88,169,974,050 plus proposed total outlier payments of \$4,738,377,622 yields the 5.1 percent target. Therefore we believe that the proposed outlier threshold and the subsequent outlier payments were appropriately calculated. We thank the commenter for noting this error.

Comment: One commenter believed that it is important that CMS accurately calculate prior year actual payment comparisons to the 5.1 percent target. The commenter asserted that it is not possible for CMS to appropriately modify the methodology to achieve an accurate result if CMS is not aware of, or misinformed about, inaccuracies resulting from the prior year's methodology. The commenter cited the FY 2017 IPPS/LTCH PPS proposed rule as an example where CMS indicated that actual

outlier payments for FY 2015 were approximately 4.68 percent of overall payments. The commenter stated that it was concerned that CMS believed the Agency would reach the 5.1 percent target for FY 2015 only to learn that the original estimate was overestimated and still raise the threshold for the subsequent year.

One commenter noted that the final outlier threshold established by CMS is always significantly lower than the threshold set forth in the proposed rule. The commenter believed the decline is most likely due to the use of updated CCRs or other data in calculating the final threshold. The commenter questioned whether CMS used more updated data for the FY 2017 and FY 2018 proposed rules as compared to prior years to calculate the proposed threshold. The commenter stated that, if this was the case, the use of more updated data may account for the decreased variance seen between the proposed and final thresholds in FYs 2017 and 2018 as compared to prior years. The commenter stated that this emphasizes that CMS must use the most recent data available when the Agency calculates the outlier threshold

Response: We responded to similar comments in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50378 through 50379) and refer readers to that rule for our response. Regarding the data used for the FY 2017 proposed rule and final rule, we used the same update of the MedPAR data as in prior fiscal years. Specifically, we use the December update of the MedPAR for the proposed rule and the March update of the MedPAR for the final rule. Also, in addition to the CCRs that can change from the proposed rule to the final rule, other factors such as the market basket typically change. For example, in the proposed rule, the market basket was 2.8 percent, and for this final rule, the market

basket is 2.9 percent. Focusing only on the market basket, a higher market basket will increase the amount of Federal payments (a higher standardized amount) and lower the amount of total outlier payments requiring a lower outlier threshold to meet the 5.1 percent target. Therefore, the result of a lower or higher outlier threshold in the final rule when comparing to the proposed rule can be as a result of different variables.

Comment: Commenters expressed concerned with the increase of the outlier threshold from \$26,601 in FY 2018 to \$27,545 in FY 2019. They stated that the continued rise in the outlier threshold results in hospitals experiencing higher losses in order to receive payment relief, in particular.

One commenter requested CMS to examine the reasons for the continued rise in the outlier threshold and to identify whether interventions can be taken to ensure outlier payments remain equitable for hospitals. Another commenter suggested a reduction to the outlier threshold amount. Another commenter noted that the proposed FY 2019 outlier threshold of \$27,545 is a 3.5 percent increase over the FY 2018 outlier threshold. This commenter stated that while CMS has not made any methodological changes to its determination of the outlier threshold, its rise is resulting in hospitals having to experience higher losses in order to receive any payment relief.

One commenter noted that CMS' estimate of FY 2017 outlier payments in the proposed rule was 5.53 percent, which is above the 5.1 percent target but falls within the statutory 5.0 to 6.0 percent outlier payment range. The commenter favored a simplified methodology and believed that, by applying a 2-year charge inflation factor and a 1-year CCR factor, CMS is inadvertently compounding its charge increase with lower costs and

overstating the outlier threshold. The commenter suggested that CMS apply the following formula to compute the FY 2019 outlier threshold:  $FFY\ 2019\ charge\ inflator\ Error = (9.5\% - 8.5868\% = 0.9132\%) / 9.5\% = 9.61\%$  *Overstatement Suggested FY 2019 Outlier Threshold* = \$27,545 (proposed 2019) \* (100% - 9.61% = 90.39%) = \$24,897. The commenter concluded that the FY 2019 fixed-loss cost threshold should not exceed \$24,897.

Response: We responded to similar comments in the FY 2015 IPPS/LTCH PPS final rule (79 FR 50379) and the FY 2016 IPPS/LTCH PPS final rule (80 FR 49783) and refer readers to those final rules for our complete responses. We also note that the final outlier threshold for FY 2019 (finalized below at \$25,769) is lower than the final threshold for FY 2018 (\$26,537).

Comment: One commenter asked that CMS consider whether it is appropriate to include extreme cases when calculating the threshold. The commenter explained that high charge cases have a significant impact on the threshold. The commenter observed that the amount of cases with over \$1.5 million in charges has increased significantly from FY 2011 (926 cases) to FY 2017 (2,291 cases). The commenter believed that the impact of these cases will cause the threshold to rise and recommended that CMS consider the removal of high charge cases from the calculation of the threshold.

Response: As we explained when responding to a similar comment in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38526), the methodology used to calculate the outlier threshold includes all claims in order to account for all different types of cases, including high charge cases, to ensure that CMS meets the 5.1 percent target. As the

commenter pointed out, the volume of these cases continues to rise, making their impact on the threshold significant. We believe excluding these cases would artificially lower the threshold. We believe it is important to include all cases in the calculation of the threshold no matter how high or low the charges. Including these cases with high charges lends more accuracy to the threshold, as these cases have an impact on the threshold and continue to rise in volume. Therefore, we disagree with the commenter.

Comment: Some commenters believe that an error exists in the calculation of the proposed FY 2019 outlier threshold related to the use of an incorrect national average CCR. These commenters did not provide any additional details on the possible nature of the error, but urged CMS to reevaluate the outlier calculation process.

Response: We appreciate commenters pointing this potential error. However, we were unable to identify such error. We have reviewed our outlier calculations for this final rule to ensure the national average CCR was calculated using the most recent available data at the time of the development of the final rule

After consideration of the public comments we received, we are not making any changes to our methodology in this final rule for FY 2019. Therefore, we are using the same methodology we proposed to calculate the final outlier threshold. We note that, as stated above, we will consider for FY 2020 using data that commenters can access earlier to validate the charge inflation factor.

Similar to the table provided in the proposed rule, for this final rule, we are providing the following table that displays covered charges and cases by quarter in the

periods used to calculate the charge inflation factor based on the latest claims data from the MedPAR file.

<b>Quarter</b>	<b>Covered Charges (April 1, 2016, through March 31, 2017)</b>	<b>Cases (April 1, 2016, through March 31, 2017)</b>	<b>Covered Charges (April 1, 2017, through March 31, 2018)</b>	<b>Cases (April 1, 2017, through March 31, 2018)</b>
April – June	\$133,106,496,424	2,356,775	\$137,726,975,443	2,319,109
July – September	\$139,415,422,805	2,413,871	\$142,676,638,337	2,363,685
October – December	\$151,053,166,855	2,559,371	\$121,360,081,623	1,983,155
January – March	\$136,264,070,864	2,415,120	\$142,121,633,027	2,407,887
<b>Total</b>	<b>\$559,839,156,948</b>	<b>9,745,137</b>	<b>\$543,885,328,430</b>	<b>9,073,836</b>

Under our current methodology, to compute the 1-year average annualized rate-of-change in charges per case for FY 2019, we compared the average covered charge per case of \$57,448 ( $\$559,839,156,948/9,745,137$ ) from the third quarter of FY 2016 through the second quarter of FY 2017 (April 1, 2016, through March 31, 2017) to the average covered charge per case of \$59,939.96 ( $\$543,885,328,430/9,073,836$ ) from the third quarter of FY 2017 through the second quarter of FY 2018 (April 1, 2017, through March 31, 2018). This rate-of-change was 4.3 percent (1.04338) or 8.9 percent (1.08864) over 2 years. The billed charges are obtained from the claim from the MedPAR file and inflated by the inflation factor specified above.

Similar to the proposed rule, for this final rule, we have made available a more detailed summary table by provider with the monthly charges that were used to compute the charge inflation factor on the CMS Web site at:

<https://www.cms.gov/Medicare/MedicareFee-for-Service-Payment/AcuteInpatientPPS/>

[index.html](#) (click on the link on the left titled “FY 2019 IPPS Final Rule Home Page” and then click the link “FY 2019 Final Rule Data Files”).

As we have done in the past, we are establishing the FY 2019 outlier threshold using hospital CCRs from the March 2018 update to the Provider-Specific File (PSF)--the most recent available data at the time of the development of the final rule. We applied the following edits to providers' CCRs in the PSF. We believe these edits are appropriate in order to accurately model the outlier threshold. We first search for Indian Health Service providers and those providers assigned the statewide average CCR from the current fiscal year. We then replaced these CCRs with the statewide average CCR for the upcoming fiscal year. We also assigned the statewide average CCR (for the upcoming fiscal year) to those providers that have no value in the CCR field in the PSF or whose CCRs exceed the ceilings described later in this section (3.0 standard deviations from the mean of the log distribution of CCRs for all hospitals). We did not apply the adjustment factors described below to hospitals assigned the statewide average CCR. For FY 2019, we also are continuing to apply an adjustment factor to the CCRs to account for cost and charge inflation (as explained below).

For this final rule, as we have done since FY 2014, we are adjusting the CCRs from the March 2018 update of the PSF by comparing the percentage change in the national average case-weighted operating CCR and capital CCR from the March 2017 update of the PSF to the national average case-weighted operating CCR and capital CCR from the March 2018 update of the PSF. We note that we used total transfer-adjusted cases from FY 2017 to determine the national average case-weighted CCRs for both sides

of the comparison. As stated in the FY 2014 IPPS/LTCH PPS final rule (78 FR 50979), we believe that it is appropriate to use the same case count on both sides of the comparison because this will produce the true percentage change in the average case-weighted operating and capital CCR from one year to the next without any effect from a change in case count on different sides of the comparison.

Using the methodology above, for this final rule, we calculated a March 2017 operating national average case-weighted CCR of 0.265819 and a March 2018 operating national average case-weighted CCR of 0.260874. We then calculated the percentage change between the two national operating case-weighted CCRs by subtracting the March 2017 operating national average case-weighted CCR from the March 2018 operating national average case-weighted CCR and then dividing the result by the March 2017 national operating average case-weighted CCR. This resulted in a national operating CCR adjustment factor of 0.981397.

We used the same methodology above to adjust the capital CCRs. Specifically, for this final rule, we calculated a March 2017 capital national average case-weighted CCR of 0.022671 and a March 2018 capital national average case-weighted CCR of 0.021554. We then calculated the percentage change between the two national capital case-weighted CCRs by subtracting the March 2017 capital national average case-weighted CCR from the March 2018 capital national average case-weighted CCR and then dividing the result by the March 2017 capital national average case-weighted CCR. This resulted in a national capital CCR adjustment factor of 0.950739.

As discussed above, similar to the proposed rule, for FY 2019, we applied the following policies (as discussed in more details above):

- In accordance with section 10324(a) of the Affordable Care Act, we created a wage index floor of 1.0000 for all hospitals located in States determined to be frontier States.
- As we did in establishing the FY 2009 outlier threshold (73 FR 57891), in our projection of FY 2019 outlier payments, we did not make any adjustments for the possibility that hospitals' CCRs and outlier payments may be reconciled upon cost report settlement.
- We excluded the hospital VBP payment adjustments and the hospital readmissions payment adjustments from the calculation of the outlier fixed-loss cost threshold.
- We used the estimated per-discharge uncompensated care payments to hospitals eligible for the uncompensated care payment for all cases in the calculation of the outlier fixed-loss cost threshold methodology.

Using this methodology, we used the formula described in section I.C.1 of this Addendum to simulate and calculate the Federal payment rate and outlier payments for all claims. We used a threshold of \$25,769 and calculated total operating Federal payments of \$88,484,589,041 and total outlier payments of \$4,755,375,555. We then divided total outlier payments by total operating Federal payments plus total outlier payments and determined that this threshold met the 5.1 percent target ( $(\$88,484,589,041 / \$93,239,964,596) \times 100 = 5.1$  percent). As a result, we are finalizing

an outlier fixed-loss cost threshold for FY 2019 equal to the prospective payment rate for the MS-DRG, plus any IME, empirically justified Medicare DSH payments, estimated uncompensated care payment, and any add-on payments for new technology, plus \$25,769.

(2) Other Changes Concerning Outliers

As stated in the FY 1994 IPPS final rule (58 FR 46348), we establish an outlier threshold that is applicable to both hospital inpatient operating costs and hospital inpatient capital-related costs. When we modeled the combined operating and capital outlier payments, we found that using a common threshold resulted in a lower percentage of outlier payments for capital-related costs than for operating costs. We project that the thresholds for FY 2019 will result in outlier payments that will equal 5.1 percent of operating DRG payments and 5.06 percent of capital payments based on the Federal rate.

In accordance with section 1886(d)(3)(B) of the Act, as we proposed, we reduced the FY 2019 standardized amount by the same percentage to account for the projected proportion of payments paid as outliers.

The outlier adjustment factors applied to the standardized amount based on the FY 2019 outlier threshold are as follows:

	<b>Operating Standardized Amounts</b>	<b>Capital Federal Rate</b>
National	0.948999	0.949431

We applied the outlier adjustment factors to the FY 2019 payment rates after removing the effects of the FY 2018 outlier adjustment factors on the standardized amount.

To determine whether a case qualifies for outlier payments, we currently apply hospital-specific CCRs to the total covered charges for the case. Estimated operating and capital costs for the case are calculated separately by applying separate operating and capital CCRs. These costs are then combined and compared with the outlier fixed-loss cost threshold.

Under our current policy at § 412.84, we calculate operating and capital CCR ceilings and assign a statewide average CCR for hospitals whose CCRs exceed 3.0 standard deviations from the mean of the log distribution of CCRs for all hospitals. Based on this calculation, for hospitals for which the MAC computes operating CCRs greater than 1.159 or capital CCRs greater than 0.151, or hospitals for which the MAC is unable to calculate a CCR (as described under § 412.84(i)(3) of our regulations), statewide average CCRs are used to determine whether a hospital qualifies for outlier payments. Table 8A listed in section VI. of this Addendum (and available only via the Internet on the CMS website) contains the statewide average operating CCRs for urban hospitals and for rural hospitals for which the MAC is unable to compute a hospital-specific CCR within the above range. These statewide average ratios will be effective for discharges occurring on or after October 1, 2018 and will replace the statewide average ratios from the prior fiscal year. Table 8B listed in section VI. of this Addendum (and available via the Internet on the CMS website) contains the comparable statewide average capital CCRs. As previously stated, the CCRs in Tables 8A and 8B will be used during FY 2019 when hospital-specific CCRs based on the latest settled cost report either are not available or are outside the range noted above. Table 8C listed in

section VI. of this Addendum (and available via the Internet on the CMS website) contains the statewide average total CCRs used under the LTCH PPS as discussed in section V. of this Addendum.

We finally note that we published a manual update (Change Request 3966) to our outlier policy on October 12, 2005, which updated Chapter 3, Section 20.1.2 of the Medicare Claims Processing Manual. The manual update covered an array of topics, including CCRs, reconciliation, and the time value of money. We encourage hospitals that are assigned the statewide average operating and/or capital CCRs to work with their MAC on a possible alternative operating and/or capital CCR as explained in Change Request 3966. Use of an alternative CCR developed by the hospital in conjunction with the MAC can avoid possible overpayments or underpayments at cost report settlement, thereby ensuring better accuracy when making outlier payments and negating the need for outlier reconciliation. We also note that a hospital may request an alternative operating or capital CCR at any time as long as the guidelines of Change Request 3966 are followed. In addition, as mentioned above, we published an additional manual update (Change Request 7192) to our outlier policy on December 3, 2010, which also updated Chapter 3, Section 20.1.2 of the Medicare Claims Processing Manual. The manual update outlines the outlier reconciliation process for hospitals and Medicare contractors. To download and view the manual instructions on outlier reconciliation, we refer readers to the CMS website: <http://www.cms.hhs.gov/manuals/downloads/clm104c03.pdf>.

(3) Alternative Considered for a Potential Change to the CCRs used for Outliers, New Technology Add-on Payments, and Payments to IPPS-Excluded Cancer Hospitals for Chimeric Antigen Receptor (CAR) T-cell Therapy

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20583), we stated we believe that, in the context of the pending new technology add-on payment applications for KYMRIAH<sup>®</sup> and YESCARTA<sup>®</sup>, there may also be merit in the suggestion from the public to allow hospitals to utilize a CCR specific to procedures involving the ICD-10-PCS procedures codes describing CAR T-cell therapy drugs for FY 2019 as part of the determination of the cost of a case for purposes of calculating outlier payments for individual FY 2019 cases, new technology add-on payments, if approved, for individual FY 2019 cases, and payments to IPPS-excluded cancer hospitals beginning in FY 2019.

We invited public comments on this alternative approach for FY 2019. We also invited public comments on how this payment alternative would affect access to care, as well as how it affects incentives to encourage lower drug prices, which is a high priority for this Administration. In addition, we stated that we were considering alternative approaches and authorities to encourage value-based care and lower drug prices. We solicited comments on how the payment methodology alternatives may intersect and affect future participation in any such alternative approaches. A summary of those comments and our responses can be found in section II.F.2.d. of the preamble of this final rule.

As also discussed in section II.F.2.d. of the preamble of this final rule, building on President Trump's *Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs*, the

CMS Center for Medicare and Medicaid Innovation (Innovation Center) solicited public comment in the CY 2019 OPPS/ASC proposed rule on key design considerations for developing a potential model that would test private market strategies and introduce competition to improve quality of care for beneficiaries, while reducing both Medicare expenditures and beneficiaries' out of pocket spending. Given the relative newness of CAR T-cell therapy, the potential model, and our request for feedback on this model approach, we believe it would be premature to adopt changes to our existing payment mechanisms for FY 2019, including allowing hospitals to utilize a CCR specific to procedures involving the ICD-10-PCS procedures codes describing CAR T-cell therapy drugs for FY 2019 as part of the determination of the cost of a case for purposes of calculating outlier payments for individual FY 2019 cases, new technology add-on payments for individual FY 2019 cases, and payments to IPPS-excluded cancer hospitals beginning in FY 2019.

#### (4) FY 2017 Outlier Payments

Our current estimate, using available FY 2017 claims data, is that actual outlier payments for FY 2017 were approximately 5.57 percent of actual total MS-DRG payments. Therefore, the data indicate that, for FY 2017, the percentage of actual outlier payments relative to actual total payments is higher than we projected for FY 2017. Consistent with the policy and statutory interpretation we have maintained since the inception of the IPPS, we do not make retroactive adjustments to outlier payments to ensure that total outlier payments for FY 2017 are equal to 5.1 percent of total MS-DRG payments. As explained in the FY 2003 Outlier Final Rule (68 FR 34502), if we were to

make retroactive adjustments to all outlier payments to ensure total payments are 5.1 percent of MS-DRG payments (by retroactively adjusting outlier payments), we would be removing the important aspect of the prospective nature of the IPPS. Because such an across-the-board adjustment would either lead to more or less outlier payments for all hospitals, hospitals would no longer be able to reliably approximate their payment for a patient while the patient is still hospitalized. We believe it would be neither necessary nor appropriate to make such an aggregate retroactive adjustment. Furthermore, we believe it is consistent with the statutory language at section 1886(d)(5)(A)(iv) of the Act not to make retroactive adjustments to outlier payments. This section states that outlier payments be equal to or greater than 5 percent and less than or equal to 6 percent of projected or estimated (not actual) MS-DRG payments. We believe that an important goal of a PPS is predictability. Therefore, we believe that the fixed-loss outlier threshold should be projected based on the best available historical data and should not be adjusted retroactively. A retroactive change to the fixed-loss outlier threshold would affect all hospitals subject to the IPPS, thereby undercutting the predictability of the system as a whole.

We note that, because the MedPAR claims data for the entire FY 2018 will not be available until after September 30, 2018, we are unable to provide an estimate of actual outlier payments for FY 2018 based on FY 2018 claims data in this final rule. We will provide an estimate of actual FY 2018 outlier payments in the FY 2020 IPPS/LTCH PPS proposed rule

Comment: One commenter noted that, in the proposed rule, CMS stated that actual outlier payments for FY 2017 were approximately 5.53 percent of total MS-DRG payments. The commenter performed its own analysis and concluded that outlier payments for FY 2017 are approximately 5.30 percent of total MS-DRG payments. The commenter was concerned that CMS' estimate was overstated.

Response: We thank the commenter for the comments. We reviewed our data to ensure the estimate provided is accurate. Therefore, we believe we have provided a reliable estimate of the outlier percentage for FY 2017. The commenter did not provide details regarding the discrepancy. We welcome additional suggestions from the public, including the commenter, to improve the accuracy of our estimate of actual outlier payments.

#### 5. FY 2019 Standardized Amount

The adjusted standardized amount is divided into labor-related and nonlabor-related portions. Tables 1A and 1B listed and published in section VI. of this Addendum (and available via the Internet on the CMS website) contain the national standardized amounts that we are applying to all hospitals, except hospitals located in Puerto Rico, for FY 2019. The standardized amount for hospitals in Puerto Rico is shown in Table 1C listed and published in section VI. of this Addendum (and available via the Internet on the CMS website). The amounts shown in Tables 1A and 1B differ only in that the labor-related share applied to the standardized amounts in Table 1A is 68.3 percent, and the labor-related share applied to the standardized amounts in Table 1B is 62 percent. In accordance with sections 1886(d)(3)(E) and 1886(d)(9)(C)(iv) of the

Act, we are applying a labor-related share of 62 percent, unless application of that percentage would result in lower payments to a hospital than would otherwise be made. In effect, the statutory provision means that we will apply a labor-related share of 62 percent for all hospitals whose wage indexes are less than or equal to 1.0000.

In addition, Tables 1A and 1B include the standardized amounts reflecting the applicable percentage increases for FY 2019.

The labor-related and nonlabor-related portions of the national average standardized amounts for Puerto Rico hospitals for FY 2019 are set forth in Table 1C listed and published in section VI. of this Addendum (and available via the Internet on the CMS website). Similar to above, section 1886(d)(9)(C)(iv) of the Act, as amended by section 403(b) of Pub. L. 108-173, provides that the labor-related share for hospitals located in Puerto Rico be 62 percent, unless the application of that percentage would result in lower payments to the hospital.

The following table illustrates the changes from the FY 2018 national standardized amount to the FY 2019 national standardized amount. The second through fifth columns display the changes from the FY 2018 standardized amounts for each applicable FY 2019 standardized amount. The first row of the table shows the updated (through FY 2018) average standardized amount after restoring the FY 2018 offsets for outlier payments and the geographic reclassification budget neutrality. The MS-DRG reclassification and recalibration and wage index budget neutrality adjustment factors are cumulative. Therefore, those FY 2018 adjustment factors are not removed from this table.

**CHANGES FROM FY 2018 STANDARDIZED AMOUNTS TO THE FY 2019  
STANDARDIZED AMOUNTS**

	<b>Hospital Submitted Quality Data and is a Meaningful EHR User</b>	<b>Hospital Submitted Quality Data and is NOT a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User</b>
FY 2018 Base Rate after removing: 1. FY 2018 Geographic Reclassification Budget Neutrality (0.987985) 2. FY 2018 Operating Outlier Offset (0.948998)	If Wage Index is Greater Than 1.0000: Labor (68.3%): \$4,059.36 Nonlabor (30.4%): \$1,884.07	If Wage Index is Greater Than 1.0000: Labor (68.3%): \$4,059.36 Nonlabor (30.4%): \$1,884.07	If Wage Index is Greater Than 1.0000: Labor (68.3%): \$4,059.36 Nonlabor (30.4%): \$1,884.07	If Wage Index is Greater Than 1.0000: Labor (68.3%): \$4,059.36 Nonlabor (30.4%): \$1,884.07
	If Wage Index is less Than or Equal to 1.0000: Labor (62%): \$3,684.92 Nonlabor (38%): \$2,258.50	If Wage Index is less Than or Equal to 1.0000: Labor (62%): \$3,684.92 Nonlabor (38%): \$2,258.50	If Wage Index is less Than or Equal to 1.0000: Labor (62%): \$3,684.92 Nonlabor (38%): \$2,258.50	If Wage Index is less Than or Equal to 1.0000: Labor (62%): \$3,684.92 Nonlabor (38%): \$2,258.50
FY 2019 Update Factor	1.0135	0.99175	1.00625	0.9845
FY 2019 MS-DRG Recalibration Budget Neutrality Factor	0.997192	0.997192	0.997192	0.997192
FY 2019 Wage Index Budget Neutrality Factor	1.000748	1.000748	1.000748	1.000748

FY 2019 Reclassification Budget Neutrality Factor	0.985932	0.985932	0.985932	0.985932
FY 2019 Operating Outlier Factor	0.948999	0.948999	0.948999	0.948999
FY 2019 Rural Demonstration Budget Neutrality Factor	0.999467	0.999467	0.999467	0.999467
Adjustment for FY 2019 Required under Section 414 of Pub. L. 114-10 (MACRA)	1.005	1.005	1.005	1.005
<b>National Standardized Amount for FY 2019 if Wage Index is Greater Than 1.0000; Labor/Non-Labor Share Percentage (68.3/31.7)</b>	<b>Labor: \$3,858.62 Nonlabor: \$1,790.90</b>	<b>Labor: \$3,775.81 Nonlabor: \$1,752.47</b>	<b>Labor: \$3,831.02 Nonlabor: \$1,778.09</b>	<b>Labor: \$3,748.21 Nonlabor: \$1,739.66</b>
<b>National Standardized Amount for FY 2019 if Wage Index is Less Than or Equal to 1.0000; Labor/Non-Labor Share Percentage (62/38)</b>	<b>Labor: \$3,502.70 Nonlabor: \$2,146.82</b>	<b>Labor: \$3,427.53 Nonlabor: \$2,100.75</b>	<b>Labor: \$3,477.65 Nonlabor: \$2,131.46</b>	<b>Labor: \$3,402.48 Nonlabor: \$2,085.39</b>

B. Adjustments for Area Wage Levels and Cost-of-Living

Tables 1A through 1C, as published in section VI. of this Addendum (and available via the Internet on the CMS website), contain the labor-related and nonlabor-related shares that we used to calculate the prospective payment rates for hospitals located in the 50 States, the District of Columbia, and Puerto Rico for FY 2019.

This section addresses two types of adjustments to the standardized amounts that are made in determining the prospective payment rates as described in this Addendum.

1. Adjustment for Area Wage Levels

Sections 1886(d)(3)(E) and 1886(d)(9)(C)(iv) of the Act require that we make an adjustment to the labor-related portion of the national prospective payment rate to account for area differences in hospital wage levels. This adjustment is made by

multiplying the labor-related portion of the adjusted standardized amounts by the appropriate wage index for the area in which the hospital is located. For FY 2019, as discussed in section IV.B.3. of the preamble of this final rule, we are applying a labor-related share of 68.3 percent for the national standardized amounts for all IPPS hospitals (including hospitals in Puerto Rico) that have a wage index value that is greater than 1.0000. Consistent with section 1886(d)(3)(E) of the Act, we are applying the wage index to a labor-related share of 62 percent of the national standardized amount for all IPPS hospitals (including hospitals in Puerto Rico) whose wage index values are less than or equal to 1.0000. In section III. of the preamble of this final rule, we discuss the data and methodology for the FY 2019 wage index.

## 2. Adjustment for Cost-of-Living in Alaska and Hawaii

Section 1886(d)(5)(H) of the Act provides discretionary authority to the Secretary to make adjustments as the Secretary deems appropriate to take into account the unique circumstances of hospitals located in Alaska and Hawaii. Higher labor-related costs for these two States are taken into account in the adjustment for area wages described above. To account for higher nonlabor-related costs for these two States, we multiply the nonlabor-related portion of the standardized amount for hospitals in Alaska and Hawaii by an adjustment factor.

In the FY 2013 IPPS/LTCH PPS final rule, we established a methodology to update the COLA factors for Alaska and Hawaii that were published by the U.S. Office of Personnel Management (OPM) every 4 years (at the same time as the update to the labor-related share of the IPPS market basket), beginning in FY 2014. We refer readers

to the FY 2013 IPPS/LTCH PPS proposed and final rules for additional background and a detailed description of this methodology (77 FR 28145 through 28146 and 77 FR 53700 through 53701, respectively).

For FY 2018, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38530 through 38531), we updated the COLA factors published by OPM for 2009 (as these are the last COLA factors OPM published prior to transitioning from COLAs to locality pay) using the methodology that we finalized in the FY 2013 IPPS/LTCH PPS final rule.

Based on the policy finalized in the FY 2013 IPPS/LTCH PPS final rule, for FY 2019, as we proposed, we are continuing to use the same COLA factors in FY 2019 that were used in FY 2018 to adjust the nonlabor-related portion of the standardized amount for hospitals located in Alaska and Hawaii. Below is a table listing the COLA factors for FY 2019.

**FY 2019 Cost-of-Living Adjustment Factors:  
Alaska and Hawaii Hospitals**

Area	Cost of living adjustment factor
Alaska:	
City of Anchorage and 80-kilometer (50-mile) radius by road	1.25
City of Fairbanks and 80-kilometer (50-mile) radius by road	1.25
City of Juneau and 80-kilometer (50-mile) radius by road	1.25
Rest of Alaska	1.25
City and County of Honolulu	1.25
County of Hawaii	1.21
County of Kauai	1.25
County of Maui and County of Kalawao	1.25

Based on the policy finalized in the FY 2013 IPPS/LTCH PPS final rule, the next update to the COLA factors for Alaska and Hawaii would occur at the same time as the update to the labor-related share of the IPPS market basket (no later than FY 2022).

### C. Calculation of the Prospective Payment Rates

#### General Formula for Calculation of the Prospective Payment Rates for FY 2019

In general, the operating prospective payment rate for all hospitals (including hospitals in Puerto Rico) paid under the IPPS, except SCHs and MDHs, for FY 2019 equals the Federal rate (which includes uncompensated care payments).

Section 205 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) (Pub. L. 114-10, enacted on April 16, 2015) extended the MDH program (which, under previous law, was to be in effect for discharges on or before March 31, 2015 only) for discharges occurring on or after April 1, 2015, through FY 2017 (that is, for discharges occurring on or before September 30, 2017). Section 50205 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted February 9, 2018, extended the MDH program for discharges on or after October 1, 2017 through September 30, 2022.

SCHs are paid based on whichever of the following rates yields the greatest aggregate payment: the Federal national rate (which, as discussed in section V.G. of the preamble of this final rule, includes uncompensated care payments); the updated hospital-specific rate based on FY 1982 costs per discharge; the updated hospital-specific rate based on FY 1987 costs per discharge; the updated hospital-specific rate based on

FY 1996 costs per discharge; or the updated hospital-specific rate based on FY 2006 costs per discharge to determine the rate that yields the greatest aggregate payment.

The prospective payment rate for SCHs for FY 2019 equals the higher of the applicable Federal rate, or the hospital-specific rate as described below. The prospective payment rate for MDHs for FY 2019 equals the higher of the Federal rate, or the Federal rate plus 75 percent of the difference between the Federal rate and the hospital-specific rate as described below. For MDHs, the updated hospital-specific rate is based on FY 1982, FY 1987, or FY 2002 costs per discharge, whichever yields the greatest aggregate payment.

#### 1. Operating and Capital Federal Payment Rate and Outlier Payment Calculation

Note: The formula below is used for actual claim payment and is also used by CMS to project the outlier threshold for the upcoming fiscal year. The difference is the source of some of the variables in the formula. For example, operating and capital CCRs for actual claim payment are from the PSF while CMS uses an adjusted CCR (as described above) to project the threshold for the upcoming fiscal year. In addition, charges for a claim payment are from the bill while charges to project the threshold are from the MedPAR data with an inflation factor applied to the charges (as described earlier).

Step 1--Determine the MS-DRG and MS-DRG relative weight for each claim based on the ICD-10-CM procedure and diagnosis codes on the claim.

Step 2--Select the applicable average standardized amount depending on whether the hospital submitted qualifying quality data and is a meaningful EHR user, as described above.

Step 3—Compute the operating and capital Federal payment rate:

- Federal Payment Rate for Operating Costs = MS-DRG Relative Weight x [(Labor-Related Applicable Standardized Amount x Applicable CBSA Wage Index) + (Nonlabor-Related Applicable Standardized Amount x Cost-of-Living Adjustment)] x (1 + IME + (DSH \* 0.25))

- Federal Payment for Capital Costs = MS-DRG Relative Weight x Federal Capital Rate x Geographic Adjustment Fact x (1 + IME + DSH)

Step 4—Determine operating and capital costs:

- Operating Costs = (Billed Charges x Operating CCR)

- Capital Costs = (Billed Charges x Capital CCR).

Step 5—Compute operating and capital outlier threshold (CMS applies a geographic adjustment to the operating and capital outlier threshold to account for local cost variation):

- Operating CCR to Total CCR = (Operating CCR) / (Operating CCR + Capital CCR)

- Operating Outlier Threshold = [Fixed Loss Threshold x ((Labor-Related Portion x CBSA Wage Index) + Nonlabor-Related portion)] x Operating CCR to Total CCR + Federal Payment with IME, DSH + Uncompensated Care Payment + New Technology Add-On Payment Amount

- Capital CCR to Total CCR = (Capital CCR) / (Operating CCR + Capital CCR)

- Capital Outlier Threshold = (Fixed Loss Threshold x Geographic Adjustment

Factor x Capital CCR to Total CCR) + Federal Payment with IME and DSH

Step 6--Compute operating and capital outlier payments:

- Marginal Cost Factor = 0.80 or 0.90 (depending on the MS-DRG)

- Operating Outlier Payment = (Operating Costs - Operating Outlier Threshold) x

Marginal Cost Factor

- Capital Outlier Payment = (Capital Costs - Capital Outlier Threshold) x

Marginal Cost Factor

The payment rate may then be further adjusted for hospitals that qualify for a low-volume payment adjustment under section 1886(d)(12) of the Act and 42 CFR 412.101(b). The base-operating DRG payment amount may be further adjusted by the hospital readmissions payment adjustment and the hospital VBP payment adjustment as described under sections 1886(q) and 1886(o) of the Act, respectively. Payments also may be reduced by the 1-percent adjustment under the HAC Reduction Program as described in section 1886(p) of the Act. We also make new technology add-on payments in accordance with section 1886(d)(5)(K) and (L) of the Act. Finally, we add the uncompensated care payment to the total claim payment amount. As noted in the formula above, we take uncompensated care payments and new technology add-on payments into consideration when calculating outlier payments.

## 2. Hospital-Specific Rate (Applicable Only to SCHs and MDHs)

### a. Calculation of Hospital-Specific Rate

Section 1886(b)(3)(C) of the Act provides that SCHs are paid based on whichever of the following rates yields the greatest aggregate payment: the Federal rate; the updated hospital-specific rate based on FY 1982 costs per discharge; the updated hospital-specific rate based on FY 1987 costs per discharge; the updated hospital-specific rate based on FY 1996 costs per discharge; or the updated hospital-specific rate based on FY 2006 costs per discharge to determine the rate that yields the greatest aggregate payment.

As noted above, as discussed in section IV.G. of the preamble of this FY 2019 IPPS/LTCH PPS final rule, section 205 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) (Pub. L. 114-10, enacted on April 16, 2015) extended the MDH program (which, under previous law, was to be in effect for discharges on or before March 31, 2015 only) for discharges occurring on or after April 1, 2015, through FY 2017 (that is, for discharges occurring on or before September 30, 2017). Section 50205 of the Bipartisan Budget Act of 2018, enacted February 9, 2018, extended the MDH program for discharges on or after October 1, 2017 through September 30, 2022. For MDHs, the updated hospital-specific rate is based on FY 1982, FY 1987, or FY 2002 costs per discharge, whichever yields the greatest aggregate payment.

For a more detailed discussion of the calculation of the hospital-specific rates, we refer readers to the FY 1984 IPPS interim final rule (48 FR 39772); the April 20, 1990

final rule with comment period (55 FR 15150); the FY 1991 IPPS final rule (55 FR 35994); and the FY 2001 IPPS final rule (65 FR 47082).

b. Updating the FY 1982, FY 1987, FY 1996, FY 2002 and FY 2006 Hospital-Specific Rate for FY 2019

Section 1886(b)(3)(B)(iv) of the Act provides that the applicable percentage increase applicable to the hospital-specific rates for SCHs and MDHs equals the applicable percentage increase set forth in section 1886(b)(3)(B)(i) of the Act (that is, the same update factor as for all other hospitals subject to the IPPS). Because the Act sets the update factor for SCHs and MDHs equal to the update factor for all other IPPS hospitals, the update to the hospital-specific rates for SCHs and MDHs is subject to the amendments to section 1886(b)(3)(B) of the Act made by sections 3401(a) and 10319(a) of the Affordable Care Act. Accordingly, the applicable percentage increases to the hospital-specific rates applicable to SCHs and MDHs are the following:

<b>FY 2019</b>	<b>Hospital Submitted Quality Data and is a Meaningful EHR User</b>	<b>Hospital Submitted Quality Data and is NOT a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User</b>
Market Basket Rate-of-Increase	2.9	2.9	2.9	2.9
Adjustment for Failure to Submit Quality Data under Section 1886(b)(3)(B)(viii) of the Act	0	0	-0.725	-0.725
Adjustment for Failure to be a Meaningful EHR User under Section 1886(b)(3)(B)(ix) of the Act	0	-2.175	0	-2.175
MFP Adjustment under Section 1886(b)(3)(B)(xi) of the Act	-0.8	-0.8	-0.8	-0.8
Statutory Adjustment under Section 1886(b)(3)(B)(xii) of the Act	-0.75	-0.75	-0.75	-0.75
<b>Applicable Percentage Increase Applied to Standardized Amount</b>	<b>1.35</b>	<b>-0.825</b>	<b>0.625</b>	<b>-1.55</b>

For a complete discussion of the applicable percentage increase applied to the hospital-specific rates for SCHs and MDHs, we refer readers to section IV.B. of the preamble of this final rule.

In addition, because SCHs and MDHs use the same MS-DRGs as other hospitals when they are paid based in whole or in part on the hospital-specific rate, the

hospital-specific rate is adjusted by a budget neutrality factor to ensure that changes to the MS-DRG classifications and the recalibration of the MS-DRG relative weights are made in a manner so that aggregate IPPS payments are unaffected. Therefore, the hospital-specific rate for an SCH or an MDH is adjusted by the MS-DRG reclassification and recalibration budget neutrality factor of 0.997192, as discussed in section III. of this Addendum. The resulting rate is used in determining the payment rate that an SCH or MDH will receive for its discharges beginning on or after October 1, 2018. We note that, in this final rule, for FY 2019, we are not making a documentation and coding adjustment to the hospital-specific rate. We refer readers to section II.D. of the preamble of this final rule for a complete discussion regarding our policies and previously finalized policies (including our historical adjustments to the payment rates) relating to the effect of changes in documentation and coding that do not reflect real changes in case-mix.

### **III. Changes to Payment Rates for Acute Care Hospital Inpatient Capital-Related Costs for FY 2019**

The PPS for acute care hospital inpatient capital-related costs was implemented for cost reporting periods beginning on or after October 1, 1991. The basic methodology for determining Federal capital prospective rates is set forth in the regulations at 42 CFR 412.308 through 412.352. Below we discuss the factors that we used to determine the capital Federal rate for FY 2019, which will be effective for discharges occurring on or after October 1, 2018.

All hospitals (except “new” hospitals under § 412.304(c)(2)) are paid based on the capital Federal rate. We annually update the capital standard Federal rate, as provided in § 412.308(c)(1), to account for capital input price increases and other factors. The regulations at § 412.308(c)(2) also provide that the capital Federal rate be adjusted annually by a factor equal to the estimated proportion of outlier payments under the capital Federal rate to total capital payments under the capital Federal rate. In addition, § 412.308(c)(3) requires that the capital Federal rate be reduced by an adjustment factor equal to the estimated proportion of payments for exceptions under § 412.348. (We note that, as discussed in the FY 2013 IPPS/LTCH PPS final rule (77 FR 53705), there is generally no longer a need for an exceptions payment adjustment factor.) However, in limited circumstances, an additional payment exception for extraordinary circumstances is provided for under § 412.348(f) for qualifying hospitals. Therefore, in accordance with § 412.308(c)(3), an exceptions payment adjustment factor may need to be applied if such payments are made. Section 412.308(c)(4)(ii) requires that the capital standard Federal

rate be adjusted so that the effects of the annual DRG reclassification and the recalibration of DRG weights and changes in the geographic adjustment factor (GAF) are budget neutral.

Section 412.374 provides for payments to hospitals located in Puerto Rico under the IPPS for acute care hospital inpatient capital-related costs, which currently specifies capital IPPS payments to hospitals located in Puerto Rico are based on 100 percent of the Federal rate.

A. Determination of the Federal Hospital Inpatient Capital-Related Prospective Payment Rate Update for FY 2019

In the discussion that follows, we explain the factors that we used to determine the capital Federal rate for FY 2019. In particular, we explain why the FY 2019 capital Federal rate will increase approximately 1.27 percent, compared to the FY 2018 capital Federal rate. As discussed in the impact analysis in Appendix A to this final rule, we estimate that capital payments per discharge will increase approximately 2.1 percent during that same period. Because capital payments constitute approximately 10 percent of hospital payments, a 1-percent change in the capital Federal rate yields only approximately a 0.1 percent change in actual payments to hospitals.

1. Projected Capital Standard Federal Rate Update

a. Description of the Update Framework

Under § 412.308(c)(1), the capital standard Federal rate is updated on the basis of an analytical framework that takes into account changes in a capital input price index (CIPI) and several other policy adjustment factors. Specifically, we adjust the projected

CIPI rate of change as appropriate each year for case-mix index-related changes, for intensity, and for errors in previous CIPI forecasts. The update factor for FY 2019 under that framework is 1.4 percent based on a projected 1.4 percent increase in the 2014-based CIPI, a 0.0 percentage point adjustment for intensity, a 0.0 percentage point adjustment for case-mix, a 0.0 percentage point adjustment for the DRG reclassification and recalibration, and a forecast error correction of 0.0 percentage point. As discussed in section III.C. of this Addendum, we continue to believe that the CIPI is the most appropriate input price index for capital costs to measure capital price changes in a given year. We also explain the basis for the FY 2019 CIPI projection in that same section of this Addendum. Below we describe the policy adjustments that we are applying in the update framework for FY 2019.

The case-mix index is the measure of the average DRG weight for cases paid under the IPPS. Because the DRG weight determines the prospective payment for each case, any percentage increase in the case-mix index corresponds to an equal percentage increase in hospital payments.

The case-mix index can change for any of several reasons:

- The average resource use of Medicare patient changes (“real” case-mix change);
- Changes in hospital documentation and coding of patient records result in higher-weighted DRG assignments (“coding effects”); and
- The annual DRG reclassification and recalibration changes may not be budget neutral (“reclassification effect”).

We define real case-mix change as actual changes in the mix (and resource requirements) of Medicare patients, as opposed to changes in documentation and coding behavior that result in assignment of cases to higher-weighted DRGs, but do not reflect higher resource requirements. The capital update framework includes the same case-mix index adjustment used in the former operating IPPS update framework (as discussed in the May 18, 2004 IPPS proposed rule for FY 2005 (69 FR 28816)). (We no longer use an update framework to make a recommendation for updating the operating IPPS standardized amounts, as discussed in section II. of Appendix B to the FY 2006 IPPS final rule (70 FR 47707).)

For FY 2019, we are projecting a 0.5 percent total increase in the case-mix index. We estimated that the real case-mix increase will equal 0.5 percent for FY 2019. The net adjustment for change in case-mix is the difference between the projected real increase in case-mix and the projected total increase in case-mix. Therefore, the net adjustment for case-mix change in FY 2019 is 0.0 percentage point.

The capital update framework also contains an adjustment for the effects of DRG reclassification and recalibration. This adjustment is intended to remove the effect on total payments of prior year's changes to the DRG classifications and relative weights, in order to retain budget neutrality for all case-mix index-related changes other than those due to patient severity of illness. Due to the lag time in the availability of data, there is a 2-year lag in data used to determine the adjustment for the effects of DRG reclassification and recalibration. For example, we have data available to evaluate the effects of the FY 2017 DRG reclassification and recalibration as part of our update for FY 2019. We

assume, for purposes of this adjustment, that the estimate of FY 2017 DRG reclassification and recalibration resulted in no change in the case-mix when compared with the case-mix index that would have resulted if we had not made the reclassification and recalibration changes to the DRGs. Therefore, as we proposed, we are making a 0.0 percentage point adjustment for reclassification and recalibration in the update framework for FY 2019.

The capital update framework also contains an adjustment for forecast error. The input price index forecast is based on historical trends and relationships ascertainable at the time the update factor is established for the upcoming year. In any given year, there may be unanticipated price fluctuations that may result in differences between the actual increase in prices and the forecast used in calculating the update factors. In setting a prospective payment rate under the framework, we make an adjustment for forecast error only if our estimate of the change in the capital input price index for any year is off by 0.25 percentage point or more. There is a 2-year lag between the forecast and the availability of data to develop a measurement of the forecast error. Historically, when a forecast error of the CIPI is greater than 0.25 percentage point in absolute terms, it is reflected in the update recommended under this framework. A forecast error of 0.0 percentage point was calculated for the FY 2017 update, for which there are historical data. That is, current historical data indicated that the forecasted FY 2017 CIPI (1.2 percent) used in calculating the FY 2017 update factor was 0.0 percentage point higher than actual realized price increases (1.2 percent). As this does not exceed the 0.25

percentage point threshold, as we proposed, we are not making an adjustment for forecast error in the update for FY 2019.

Under the capital IPPS update framework, we also make an adjustment for changes in intensity. Historically, we calculated this adjustment using the same methodology and data that were used in the past under the framework for operating IPPS. The intensity factor for the operating update framework reflected how hospital services are utilized to produce the final product, that is, the discharge. This component accounts for changes in the use of quality-enhancing services, for changes within DRG severity, and for expected modification of practice patterns to remove noncost-effective services. Our intensity measure is based on a 5-year average.

We calculate case-mix constant intensity as the change in total cost per discharge, adjusted for price level changes (the CPI for hospital and related services) and changes in real case-mix. Without reliable estimates of the proportions of the overall annual intensity changes that are due, respectively, to ineffective practice patterns and the combination of quality-enhancing new technologies and complexity within the DRG system, we assume that one-half of the annual change is due to each of these factors. The capital update framework thus provides an add-on to the input price index rate of increase of one-half of the estimated annual increase in intensity, to allow for increases within DRG severity and the adoption of quality-enhancing technology.

In this final rule, as we proposed, we are continuing to use a Medicare-specific intensity measure that is based on a 5-year adjusted average of cost per discharge for FY 2019 (we refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50436) for

a full description of our Medicare-specific intensity measure). Specifically, for FY 2019, we are using an intensity measure that is based on an average of cost per discharge data from the 5-year period beginning with FY 2012 and extending through FY 2016. Based on these data, we estimated that case-mix constant intensity declined during FYs 2012 through 2016. In the past, when we found intensity to be declining, we believed a zero (rather than a negative) intensity adjustment was appropriate. Consistent with this approach, because we estimated that intensity will decline during that 5-year period, we believe it is appropriate to continue to apply a zero intensity adjustment for FY 2019. Therefore, as we proposed, we are making a 0.0 percentage point adjustment for intensity in the update for FY 2019.

Above we described the basis of the components we used to develop the 1.4 percent capital update factor under the capital update framework for FY 2019, as shown in the following table.

**CMS FY 2019 UPDATE FACTOR TO THE  
CAPITAL FEDERAL RATE**

Capital Input Price Index*	1.4
Intensity:	0.0
Case-Mix Adjustment Factors:	
Real Across DRG Change	0.5
Projected Case-Mix Change	0.5
Subtotal	1.4
Effect of FY 2017 Reclassification and Recalibration	0.0
Forecast Error Correction	0.0
Total Update	1.4

\*The capital input price index represents the 2014-based CIPI.

b. Comparison of CMS and MedPAC Update Recommendation

In its March 2018 Report to Congress, MedPAC did not make a specific update recommendation for capital IPPS payments for FY 2019. (We refer readers to MedPAC's Report to the Congress: Medicare Payment Policy, March 2018, Chapter 3, available on the website at: <http://www.medpac.gov>.)

2. Outlier Payment Adjustment Factor

Section 412.312(c) establishes a unified outlier payment methodology for inpatient operating and inpatient capital-related costs. A single set of thresholds is used to identify outlier cases for both inpatient operating and inpatient capital-related payments. Section 412.308(c)(2) provides that the standard Federal rate for inpatient capital-related costs be reduced by an adjustment factor equal to the estimated proportion of capital-related outlier payments to total inpatient capital-related PPS payments. The outlier thresholds are set so that operating outlier payments are projected to be 5.1 percent of total operating IPPS DRG payments.

For FY 2018, we estimated that outlier payments for capital would equal 5.17 percent of inpatient capital-related payments based on the capital Federal rate in FY 2018. Based on the thresholds, as set forth in section II.A. of this Addendum, we estimate that outlier payments for capital-related costs will equal 5.06 percent for inpatient capital-related payments based on the capital Federal rate in FY 2019. Therefore, we are applying an outlier adjustment factor of 0.9494 in determining the capital Federal rate for FY 2019. Thus, we estimate that the percentage of capital outlier

payments to total capital Federal rate payments for FY 2019 will be lower than the percentage for FY 2018.

The outlier reduction factors are not built permanently into the capital rates; that is, they are not applied cumulatively in determining the capital Federal rate. The FY 2019 outlier adjustment of 0.9494 is a 0.12 percent change from the FY 2018 outlier adjustment of 0.9483. Therefore, the net change in the outlier adjustment to the capital Federal rate for FY 2019 is 1.0012 ( $0.9494/0.9483$ ) so that the outlier adjustment will increase the FY 2019 capital Federal rate by 0.12 percent compared to the FY 2018 outlier adjustment.

### 3. Budget Neutrality Adjustment Factor for Changes in DRG Classifications and Weights and the GAF

Section 412.308(c)(4)(ii) requires that the capital Federal rate be adjusted so that aggregate payments for the fiscal year based on the capital Federal rate, after any changes resulting from the annual DRG reclassification and recalibration and changes in the GAF, are projected to equal aggregate payments that would have been made on the basis of the capital Federal rate without such changes. The budget neutrality factor for DRG reclassifications and recalibration nationally is applied in determining the capital IPPS Federal rate, and is applicable for all hospitals, including those hospitals located in Puerto Rico.

To determine the factors for FY 2019, we compared estimated aggregate capital Federal rate payments based on the FY 2018 MS-DRG classifications and relative weights and the FY 2018 GAF to estimated aggregate capital Federal rate payments

based on the FY 2018 MS-DRG classifications and relative weights and the FY 2019 GAFs. To achieve budget neutrality for the changes in the GAFs, based on calculations using updated data, we are applying an incremental budget neutrality adjustment factor of 0.9986 for FY 2019 to the previous cumulative FY 2018 adjustment factor.

We then compared estimated aggregate capital Federal rate payments based on the FY 2018 MS-DRG relative weights and the FY 2019 GAFs to estimate aggregate capital Federal rate payments based on the cumulative effects of the FY 2019 MS-DRG classifications and relative weights and the FY 2019 GAFs. The incremental adjustment factor for DRG classifications and changes in relative weights is 0.9989. The incremental adjustment factors for MS-DRG classifications and changes in relative weights and for changes in the GAFs through FY 2019 is 0.9975. We note that all the values are calculated with unrounded numbers.

The GAF/DRG budget neutrality adjustment factors are built permanently into the capital rates; that is, they are applied cumulatively in determining the capital Federal rate. This follows the requirement under § 412.308(c)(4)(ii) that estimated aggregate payments each year be no more or less than they would have been in the absence of the annual DRG reclassification and recalibration and changes in the GAFs.

The methodology used to determine the recalibration and geographic adjustment factor (GAF/DRG) budget neutrality adjustment is similar to the methodology used in establishing budget neutrality adjustments under the IPPS for operating costs. One difference is that, under the operating IPPS, the budget neutrality adjustments for the effect of geographic reclassifications are determined separately from the effects of other

changes in the hospital wage index and the MS-DRG relative weights. Under the capital IPPS, there is a single GAF/DRG budget neutrality adjustment factor for changes in the GAF (including geographic reclassification) and the MS-DRG relative weights. In addition, there is no adjustment for the effects that geographic reclassification has on the other payment parameters, such as the payments for DSH or IME.

The incremental adjustment factor of 0.9975 (the product of the incremental national GAF budget neutrality adjustment factor of 0.9986 and the incremental DRG budget neutrality adjustment factor of 0.9989) accounts for the MS-DRG reclassifications and recalibration and for changes in the GAFs. It also incorporates the effects on the GAFs of FY 2019 geographic reclassification decisions made by the MGCRB compared to FY 2018 decisions. However, it does not account for changes in payments due to changes in the DSH and IME adjustment factors.

#### 4. Capital Federal Rate for FY 2019

For FY 2018, we established a capital Federal rate of \$453.95 (82 FR 46144 through 46145). We are establishing an update of 1.4 percent in determining the FY 2019 capital Federal rate for all hospitals. As a result of this update and the budget neutrality factors discussed earlier, we are establishing a national capital Federal rate of \$459.72 for FY 2019. The national capital Federal rate for FY 2019 was calculated as follows:

- The FY 2019 update factor is 1.014; that is, the update is 1.4 percent.

- The FY 2019 budget neutrality adjustment factor that is applied to the capital Federal rate for changes in the MS-DRG classifications and relative weights and changes in the GAFs is 0.9975.

- The FY 2019 outlier adjustment factor is 0.9494.

We are providing the following chart that shows how each of the factors and adjustments for FY 2019 affects the computation of the FY 2019 national capital Federal rate in comparison to the FY 2018 national capital Federal rate as presented in the FY 2018 IPPS/LTCH PPS Correction Notice (82 FR 46144 through 46145). The FY 2019 update factor has the effect of increasing the capital Federal rate by 1.4 percent compared to the FY 2018 capital Federal rate. The GAF/DRG budget neutrality adjustment factor has the effect of decreasing the capital Federal rate by 0.25 percent. The FY 2019 outlier adjustment factor has the effect of increasing the capital Federal rate by 0.12 percent compared to the FY 2018 capital Federal rate. The combined effect of all the changes will increase the national capital Federal rate by approximately 1.27 percent, compared to the FY 2018 national capital Federal rate.

**COMPARISON OF FACTORS AND ADJUSTMENTS: FY 2018 CAPITAL FEDERAL RATE AND FY 2019 CAPITAL FEDERAL RATE**

	<b>FY 2018</b>	<b>FY 2019</b>	<b>Change</b>	<b>Percent Change</b>
Update Factor <sup>1</sup>	1.0130	1.0140	1.014	1.40
GAF/DRG Adjustment Factor <sup>1</sup>	0.9987	0.9975	0.9975	-0.25
Outlier Adjustment Factor <sup>2</sup>	0.9483	0.9494	1.0012	0.12
Capital Federal Rate	\$453.95	\$459.72	1.0127	1.27 <sup>3</sup>

<sup>1</sup> The update factor and the GAF/DRG budget neutrality adjustment factors are built permanently into the capital Federal rates. Thus, for example, the incremental change from FY 2018 to FY 2019 resulting from

the application of the 0.9975 GAF/DRG budget neutrality adjustment factor for FY 2019 is a net change of 0.9975 (or -0.25 percent).

<sup>2</sup> The outlier reduction factor is not built permanently into the capital Federal rate; that is, the factor is not applied cumulatively in determining the capital Federal rate. Thus, for example, the net change resulting from the application of the FY 2019 outlier adjustment factor is 0.9494/0.9483 or 1.0012 (or 0.12 percent).

<sup>3</sup> Percent change may not sum due to rounding.

In this final rule, we also are providing the following chart that shows how the final FY 2019 capital Federal rate differs from the proposed FY 2019 capital Federal rate as presented in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20587 through 20589).

**COMPARISON OF FACTORS AND ADJUSTMENTS: PROPOSED FY 2019 CAPITAL FEDERAL RATE AND FINAL FY 2019 CAPITAL FEDERAL RATE**

	<b>Proposed FY 2019</b>	<b>Final FY 2019</b>	<b>Change</b>	<b>Percent Change*</b>
Update Factor	1.0120	1.0140	1.0020	0.20
GAF/DRG Adjustment Factor	0.9997	0.9975	-0.0022	-0.22
Outlier Adjustment Factor	0.9494	0.9494	0.0000	0.00
Capital Federal Rate	\$459.78	\$459.72	0.9999	-0.01

\* Percent change may not sum due to rounding.

**B. Calculation of the Inpatient Capital-Related Prospective Payments for FY 2019**

For purposes of calculating payments for each discharge during FY 2019, the capital Federal rate is adjusted as follows: (Standard Federal Rate) x (DRG weight) x (GAF) x (COLA for hospitals located in Alaska and Hawaii) x (1 + DSH Adjustment Factor + IME Adjustment Factor, if applicable). The result is the adjusted capital Federal rate.

Hospitals also may receive outlier payments for those cases that qualify under the thresholds established for each fiscal year. Section 412.312(c) provides for a single set of thresholds to identify outlier cases for both inpatient operating and inpatient capital-related payments. The outlier thresholds for FY 2019 are in section II.A. of this Addendum. For FY 2019, a case will qualify as a cost outlier if the cost for the case plus the (operating) IME and DSH payments (including both the empirically justified Medicare DSH payment and the estimated uncompensated care payment, as discussed in section II.A.4.g.(1) of this Addendum) is greater than the prospective payment rate for the MS-DRG plus the fixed-loss amount of \$25,769.

Currently, as provided under § 412.304(c)(2), we pay a new hospital 85 percent of its reasonable costs during the first 2 years of operation, unless it elects to receive payment based on 100 percent of the capital Federal rate. Effective with the third year of operation, we pay the hospital based on 100 percent of the capital Federal rate (that is, the same methodology used to pay all other hospitals subject to the capital PPS).

### C. Capital Input Price Index

#### 1. Background

Like the operating input price index, the capital input price index (CIPI) is a fixed-weight price index that measures the price changes associated with capital costs during a given year. The CIPI differs from the operating input price index in one important aspect--the CIPI reflects the vintage nature of capital, which is the acquisition and use of capital over time. Capital expenses in any given year are determined by the stock of capital in that year (that is, capital that remains on hand from all current and

prior capital acquisitions). An index measuring capital price changes needs to reflect this vintage nature of capital. Therefore, the CIPI was developed to capture the vintage nature of capital by using a weighted-average of past capital purchase prices up to and including the current year.

We periodically update the base year for the operating and capital input price indexes to reflect the changing composition of inputs for operating and capital expenses. For this FY 2019 IPPS/LTCH PPS final rule, we are using the rebased and revised IPPS operating and capital market baskets that reflect a 2014 base year. For a complete discussion of this rebasing, we refer readers to section IV. of the preamble of the FY 2018 IPPS/LTCH PPS final rule (82 FR 38170).

## 2. Forecast of the CIPI for FY 2019

Based on IHS Global Inc.'s second quarter 2018 forecast, for this final rule, we are forecasting the 2014-based CIPI to increase 1.4 percent in FY 2019. This reflects a projected 1.6 percent increase in vintage-weighted depreciation prices (building and fixed equipment, and movable equipment), and a projected 3.9 percent increase in other capital expense prices in FY 2019, partially offset by a projected 1.2 percent decline in vintage-weighted interest expense prices in FY 2019. The weighted average of these three factors produces the forecasted 1.4 percent increase for the 2014-based CIPI in FY 2019.

**IV. Changes to Payment Rates for Excluded Hospitals: Rate-of-Increase****Percentages for FY 2019**

Payments for services furnished in children's hospitals, 11 cancer hospitals, and hospitals located outside the 50 States, the District of Columbia and Puerto Rico (that is, short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa) that are excluded from the IPPS are made on the basis of reasonable costs based on the hospital's own historical cost experience, subject to a rate-of-increase ceiling. A per discharge limit (the target amount, as defined in § 413.40(a) of the regulations) is set for each hospital, based on the hospital's own cost experience in its base year, and updated annually by a rate-of-increase percentage specified in § 413.40(c)(3). In addition, as specified in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38536), effective for cost reporting periods beginning during FY 2018, the annual update to the target amount for extended neoplastic disease care hospitals (hospitals described in § 412.22(i) of the regulations) also is the rate-of-increase percentage specified in § 413.40(c)(3). (We note that, in accordance with § 403.752(a), religious nonmedical health care institutions (RNHCIs) are also subject to the rate-of-increase limits established under § 413.40 of the regulations.)

The FY 2019 rate-of-increase percentage for updating the target amounts for the 11 cancer hospitals, children's hospitals, the short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa, RNHCIs, and extended neoplastic disease care hospitals is the estimated percentage increase in the IPPS operating market basket for FY 2019, in accordance with applicable

regulations at § 413.40. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20449), based on IGI's 2017 fourth quarter forecast, we estimated that the 2014-based IPPS operating market basket update for FY 2019 was 2.8 percent (that is, the estimate of the market basket rate-of-increase). However, we proposed that if more recent data became available for the final rule, we would use them to calculate the IPPS operating market basket update for FY 2019. For this final rule, based on IGI's 2018 second quarter forecast (which is the most recent available data), we estimated that the 2014-based IPPS operating market basket update for FY 2019 is 2.9 percent (that is, the estimate of the market basket rate-of-increase). Therefore, for children's hospitals, the 11 cancer hospitals, hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa), extended neoplastic disease care hospitals, and RNHCIs, the FY 2019 rate-of-increase percentage that will be applied to the FY 2018 target amounts, in order to determine the FY 2019 target amounts is 2.9 percent.

The IRF PPS, the IPF PPS, and the LTCH PPS are updated annually. We refer readers to section VII. of the preamble of this final rule and section V. of the Addendum to this final rule for the updated changes to the Federal payment rates for LTCHs under the LTCH PPS for FY 2019. The annual updates for the IRF PPS and the IPF PPS are issued by the agency in separate **Federal Register** documents.

## **V. Changes to the Payment Rates for the LTCH PPS for FY 2019**

### **A. LTCH PPS Standard Federal Payment Rate for FY 2019**

#### **1. Overview**

In section VII. of the preamble of this final rule, we discuss our annual updates to the payment rates, factors, and specific policies under the LTCH PPS for FY 2019.

Under § 412.523(c)(3) of the regulations, for LTCH PPS FYs 2012 through 2017, we updated the standard Federal payment rate by the most recent estimate of the LTCH PPS market basket at that time, including additional statutory adjustments required by sections 1886(m)(3)(A)(i) (citing sections 1886(b)(3)(B)(xi)(II), 1886(m)(3)(A)(ii), and 1886(m)(4) of the Act as set forth in the regulations at § 412.523(c)(3)(viii) through (c)(3)(xiii)). (For a summary of the payment rate development prior to FY 2012, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38310 through 38312).)

Sections 1886(m)(3)(A) and 1886(m)(3)(C) of the Act specify that, for rate year 2010 and each subsequent rate year, except FY 2018, any annual update to the standard Federal payment rate shall be reduced:

- For rate year 2010 through 2019, by the “other adjustment” specified in section 1886(m)(3)(A)(ii) and (m)(4) of the Act; and
- For rate year 2012 and each subsequent year, by the productivity adjustment described in section 1886(b)(3)(B)(xi)(II) of the Act (which we refer to as “the multifactor productivity (MFP) adjustment”) as discussed in section VII.D.2. of the preamble of this final rule.

This section of the Act further provides that the application of section 1886(m)(3)(B) of the Act may result in the annual update being less than zero for a rate year, and may result in payment rates for a rate year being less than such payment rates for the preceding rate year. (As noted in section VII.D.2.a. of the preamble of this final rule, the annual update to the LTCH PPS occurs on October 1 and we have adopted the term “fiscal year” (FY) rather than “rate year” (RY) under the LTCH PPS beginning October 1, 2010. Therefore, for purposes of clarity, when discussing the annual update for the LTCH PPS, including the provisions of the Affordable Care Act, we use the term “fiscal year” rather than “rate year” for 2011 and subsequent years.)

For LTCHs that fail to submit the required quality reporting data in accordance with the LTCH QRP, the annual update is reduced by 2.0 percentage points as required by section 1886(m)(5) of the Act.

## 2. Development of the FY 2019 LTCH PPS Standard Federal Payment Rate

Consistent with our historical practice, for FY 2019, as we proposed, we are applying the annual update to the LTCH PPS standard Federal payment rate from the previous year. Furthermore, in determining the LTCH PPS standard Federal payment rate for FY 2019, we also are making certain regulatory adjustments, consistent with past practices. Specifically, in determining the FY 2019 LTCH PPS standard Federal payment rate, as we proposed, we are applying a budget neutrality adjustment factor for the changes related to the area wage adjustment (that is, changes to the wage data and labor-related share) in accordance with § 412.523(d)(4) and a temporary budget neutrality adjustment factor to LTCH PPS standard Federal payment rate cases only for the cost of

the elimination of the 25-percent threshold policy for FY 2019 (discussed in VII.E. of the preamble of this final rule).

In this FY 2019 IPPS/LTCH PPS final rule, we are establishing an annual update to the LTCH PPS standard Federal payment rate of 1.35 percent. Accordingly, under § 412.523(c)(3)(xv), we are applying a factor of 1.0135 to the FY 2018 LTCH PPS standard Federal payment rate of \$41,415.11 to determine the FY 2019 LTCH PPS standard Federal payment rate. Also, under § 412.523(c)(3)(xv), applied in conjunction with the provisions of § 412.523(c)(4), we are establishing an annual update to the LTCH PPS standard Federal payment rate of -0.65 percent (that is, an update factor of 0.9935) for FY 2019 for LTCHs that fail to submit the required quality reporting data for FY 2019 as required under the LTCH QRP. Consistent with § 412.523(d)(4), we also are applying an area wage level budget neutrality factor to the FY 2019 LTCH PPS standard Federal payment rate of 0.999713 based on the best available data at this time, to ensure that any changes to the area wage level adjustment (that is, the annual update of the wage index values and labor-related share) would not result in any change (increase or decrease) in estimated aggregate LTCH PPS standard Federal rate payments. Finally, we are applying a temporary budget neutrality adjustment factor of 0.990884 to LTCH PPS standard Federal payment rate cases only for the cost of the elimination of the 25-percent threshold policy for FY 2019 (discussed in VII.E. of the preamble of this final rule). Accordingly, we are establishing an LTCH PPS standard Federal payment rate of \$41,579.65 (calculated as  $\$41,415.11 \times 1.0135 \times 0.999713 \times 0.990884$ ) for FY 2019 (calculations performed on rounded numbers). For LTCHs that fail to submit quality

reporting data for FY 2019, in accordance with the requirements of the LTCH QRP under section 1866(m)(5) of the Act, we are establishing an LTCH PPS standard Federal payment rate of \$40,759.12 (calculated as  $\$41,415.11 \times 0.9935 \times 0.999713 \times 0.990884$ ) (calculations performed on rounded numbers) for FY 2019.

We did not receive any public comments on the proposed development of the FY 2019 LTCH PPS standard Federal payment rate. Therefore, we are finalizing our proposals as described above, without modification.

## B. Adjustment for Area Wage Levels under the LTCH PPS for FY 2019

### 1. Background

Under the authority of section 123 of the BBRA, as amended by section 307(b) of the BIPA, we established an adjustment to the LTCH PPS standard Federal payment rate to account for differences in LTCH area wage levels under § 412.525(c). The labor-related share of the LTCH PPS standard Federal payment rate is adjusted to account for geographic differences in area wage levels by applying the applicable LTCH PPS wage index. The applicable LTCH PPS wage index is computed using wage data from inpatient acute care hospitals without regard to reclassification under section 1886(d)(8) or section 1886(d)(10) of the Act.

### 2. Geographic Classifications (Labor Market Areas) for the LTCH PPS Standard Federal Payment Rate

In adjusting for the differences in area wage levels under the LTCH PPS, the labor-related portion of an LTCH's Federal prospective payment is adjusted by using an appropriate area wage index based on the geographic classification (labor market area) in

which the LTCH is located. Specifically, the application of the LTCH PPS area wage level adjustment under existing § 412.525(c) is made based on the location of the LTCH--either in an “urban area,” or a “rural area,” as defined in § 412.503. Under § 412.503, an “urban area” is defined as a Metropolitan Statistical Area (MSA) (which includes a Metropolitan division, where applicable), as defined by the Executive OMB and a “rural area” is defined as any area outside of an urban area. (Information on OMB’s MSA delineations based on the 2010 standards can be found at:

[https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/fedreg\\_2010/062820\\_10\\_metro\\_standards-Complete.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/fedreg_2010/062820_10_metro_standards-Complete.pdf).)

The CBSA-based geographic classifications (labor market area definitions) currently used under the LTCH PPS, effective for discharges occurring on or after October 1, 2014, are based on the OMB labor market area delineations based on the 2010 Decennial Census data. The current statistical areas (which were implemented beginning with FY 2015) are based on revised OMB delineations issued on February 28, 2013, in OMB Bulletin No. 13-01. We adopted these labor market area delineations because they are based on the best available data that reflect the local economies and area wage levels of the hospitals that are currently located in these geographic areas. We also believe that these OMB delineations will ensure that the LTCH PPS area wage level adjustment most appropriately accounts for and reflects the relative hospital wage levels in the geographic area of the hospital as compared to the national average hospital wage level. We noted that this policy was consistent with the IPPS policy adopted in FY 2015 under § 412.64(b)(1)(ii)(D) of the regulations (79 FR 49951 through 49963). (For additional

information on the CBSA-based labor market area (geographic classification) delineations currently used under the LTCH PPS and the history of the labor market area definitions used under the LTCH PPS, we refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 50180 through 50185).)

In general, it is our historical practice to update the CBSA-based labor market area delineations annually based on the most recent updates issued by OMB. Generally, OMB issues major revisions to statistical areas every 10 years, based on the results of the decennial census. However, OMB occasionally issues minor updates and revisions to statistical areas in the years between the decennial censuses. On July 15, 2015, OMB issued OMB Bulletin No. 15-01, which provided updates to and superseded OMB Bulletin No. 13-01 that was issued on February 28, 2013. The attachment to OMB Bulletin No. 15-01 provided detailed information on the update to statistical areas since February 28, 2013. We adopted the updates contained in OMB Bulletin No. 15-01, as discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56913 through 56914). On August 15, 2017, OMB issued OMB Bulletin No. 17-01 that updated and superseded Bulletin No. 15-01. As discussed in the proposed rule and in section III.A.2. of the preamble of this final rule, OMB Bulletin No. 17-01 and its attachments provide detailed information on the update to statistical areas since the July 15, 2015 release of Bulletin No. 15-01 and are based on the application of the 2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas to Census Bureau population estimates for July 1, 2014, and July 1, 2015. A copy of

this bulletin may be obtained on the website at:

<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/bulletins/2017/b-17-01.pdf>.

OMB Bulletin No. 17–01 made the following change that is relevant to the LTCH PPS CBSA-based labor market area (geographic classification) delineations:

- Twin Falls, ID, with principal city Twin Falls, ID and consisting of counties Jerome County, ID and Twin Falls County, ID, which was a Micropolitan (geographically rural) area, now qualifies as an urban area under new CBSA 46300 entitled Twin Falls, ID.

This change affects all providers located in CBSA 46300, but our database shows no LTCHs located in CBSA 46300.

We believe that this revision to the CBSA-based labor market area delineations will ensure that the LTCH PPS area wage level adjustment most appropriately accounts for and reflects the relative hospital wage levels in the geographic area of the hospital as compared to the national average hospital wage level based on the best available data that reflect the local economies and area wage levels of the hospitals that are currently located in these geographic areas (81 FR 57298). Therefore, as we proposed, we are adopting this revision under the LTCH PPS, effective October 1, 2018. Accordingly, the FY 2019 LTCH PPS wage index values in Tables 12A and 12B listed in section VI. of the Addendum to this final rule (which are available via the Internet on the CMS website) reflect the revision to the CBSA-based labor market area delineations described above. We note that, as discussed in section III.A.2. of the preamble of this final rule, the revision to the CBSA-based delineations also is being used under the IPPS.

We did not receive any public comments in response to our proposal.

### 3. Labor-Related Share for the LTCH PPS Standard Federal Payment Rate

Under the payment adjustment for the differences in area wage levels under § 412.525(c), the labor-related share of an LTCH's standard Federal payment rate payment is adjusted by the applicable wage index for the labor market area in which the LTCH is located. The LTCH PPS labor-related share currently represents the sum of the labor-related portion of operating costs and a labor-related portion of capital costs using the applicable LTCH PPS market basket. Additional background information on the historical development of the labor-related share under the LTCH PPS can be found in the RY 2007 LTCH PPS final rule (71 FR 27810 through 27817 and 27829 through 27830) and the FY 2012 IPPS/LTCH PPS final rule (76 FR 51766 through 51769 and 51808).

For FY 2013, we rebased and revised the market basket used under the LTCH PPS by adopting a 2009-based LTCH-specific market basket. In addition, beginning in FY 2013, we determined the labor-related share annually as the sum of the relative importance of each labor-related cost category of the 2009-based LTCH-specific market basket for the respective fiscal year based on the best available data. (For more details, we refer readers to the FY 2013 IPPS/LTCH PPS final rule (77 FR 53477 through 53479).) As noted previously, we rebased and revised the 2009-based LTCH-specific market basket to reflect a 2013 base year. In conjunction with that policy, as discussed in section VII.D. of the preamble of this FY 2019 IPPS/LTCH PPS final rule, as we proposed, we are establishing that the LTCH PPS labor-related share for FY 2019 is the

sum of the FY 2019 relative importance of each labor-related cost category in the 2013-based LTCH market basket using the most recent available data.

In the proposed rule, we proposed to establish that the labor-related share for FY 2019 includes the sum of the labor-related portion of operating costs from the 2013-based LTCH market basket (that is, the sum of the FY 2019 relative importance share of Wages and Salaries; Employee Benefits; Professional Fees: Labor-Related; Administrative and Facilities Support Services; Installation, Maintenance, and Repair Services; All Other: Labor-related Services) and a portion of the Capital-Related cost weight from the 2013-based LTCH PPS market basket. Based on IGI's fourth quarter 2017 forecast of the 2013-based LTCH market basket, we proposed to establish a labor-related share under the LTCH PPS for FY 2019 of 66.2 percent. (We noted that a proposed labor-related share of 66.2 percent was the same as the labor-related share for FY 2018, and although the relative importance of some components of the market basket have changed, the proposed labor-related share remained at 66.2 percent when aggregating these components and rounding to one decimal.) This proposed labor-related share was determined using the same methodology as employed in calculating all previous LTCH PPS labor-related shares. Consistent with our historical practice, we also proposed that if more recent data became available, we would use that data, if appropriate, to determine the final FY 2019 labor-related share in the final rule.

We did not receive any public comments in response to our proposals. Therefore, we are finalizing our proposals, without modification.

In this final rule, we are establishing that the labor-related share for FY 2019 includes the sum of the labor-related portion of operating costs from the 2013-based LTCH market basket (that is, the sum of the FY 2019 relative importance share of Wages and Salaries; Employee Benefits; Professional Fees: Labor-Related; Administrative and Facilities Support Services; Installation, Maintenance, and Repair Services; All Other: Labor-related Services) and a portion of the Capital-Related cost weight from the 2013-based LTCH PPS market basket. Based on IGI's second quarter 2018 forecast of the 2013-based LTCH market basket, consistent with our proposal, we are establishing a labor-related share under the LTCH PPS for FY 2019 of 66.0 percent. This labor-related share is determined using the same methodology as employed in calculating all previous LTCH PPS labor-related shares.

The labor-related share for FY 2019 is the sum of the FY 2019 relative importance of each labor-related cost category, and reflects the different rates of price change for these cost categories between the base year (2013) and FY 2019. The sum of the relative importance for FY 2019 for operating costs (Wages and Salaries; Employee Benefits; Professional Fees: Labor-Related; Administrative and Facilities Support Services; Installation, Maintenance, and Repair Services; All Other: Labor-Related Services) is 61.8 percent. The portion of capital-related costs that is influenced by the local labor market is estimated to be 46 percent (the same percentage applied to the 2009-based LTCH-specific market basket). Because the relative importance for capital-related costs under our policies is 9.1 percent of the 2013-based LTCH market basket in FY 2019, as we proposed, we are taking 46 percent of 9.1 percent to determine

the labor-related share of capital-related costs for FY 2019 (0.46 x 9.1). The result is 4.2 percent, which we added to 61.8 percent for the operating cost amount to determine the total labor-related share for FY 2019. Therefore, as we proposed, we are establishing that the labor-related share under the LTCH PPS for FY 2019 is 66.0 percent.

#### 4. Wage Index for FY 2019 for the LTCH PPS Standard Federal Payment Rate

Historically, we have established LTCH PPS area wage index values calculated from acute care IPPS hospital wage data without taking into account geographic reclassification under sections 1886(d)(8) and 1886(d)(10) of the Act (67 FR 56019). The area wage level adjustment established under the LTCH PPS is based on an LTCH's actual location without regard to the "urban" or "rural" designation of any related or affiliated provider.

In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38538 through 38539), we calculated the FY 2018 LTCH PPS area wage index values using the same data used for the FY 2018 acute care hospital IPPS (that is, data from cost reporting periods beginning during FY 2014), without taking into account geographic reclassification under sections 1886(d)(8) and 1886(d)(10) of the Act, as these were the most recent complete data available at that time. In that same final rule, we indicated that we computed the FY 2018 LTCH PPS area wage index values, consistent with the urban and rural geographic classifications (labor market areas) that were in place at that time and consistent with the pre-reclassified IPPS wage index policy (that is, our historical policy of not taking into account IPPS geographic reclassifications in determining payments under the LTCH PPS). As with the IPPS wage index, wage data for multicampus

hospitals with campuses located in different labor market areas (CBSAs) are apportioned to each CBSA where the campus (or campuses) are located. We also continued to use our existing policy for determining area wage index values for areas where there are no IPPS wage data.

Consistent with our historical methodology, as discussed in the FY 2019 IPPS/LTCH PPS proposed rule, to determine the applicable area wage index values for the FY 2019 LTCH PPS standard Federal payment rate, under the broad authority of section 123 of the BBRA, as amended by section 307(b) of the BIPA, we proposed to use wage data collected from cost reports submitted by IPPS hospitals for cost reporting periods beginning during FY 2015, without taking into account geographic reclassification under sections 1886(d)(8) and 1886(d)(10) of the Act because these data were the most recent complete data available. We also note that these are the same data we are using to compute the FY 2019 acute care hospital inpatient wage index, as discussed in section III. of the preamble of this final rule. We proposed to compute the FY 2019 LTCH PPS standard Federal payment rate area wage index values consistent with the “urban” and “rural” geographic classifications (that is, labor market area delineations, including the updates, as previously discussed in section V.B. of this Addendum) and our historical policy of not taking into account IPPS geographic reclassifications under sections 1886(d)(8) and 1886(d)(10) of the Act in determining payments under the LTCH PPS. We also proposed to continue continuing to apportion wage data for multicampus hospitals with campuses located in different labor market areas to each CBSA where the campus or campuses are located, consistent with the IPPS

policy. Lastly, consistent with our existing methodology for determining the LTCH PPS wage index values, for FY 2019, we proposed to continue to use our existing policy for determining area wage index values for areas where there are no IPPS wage data. Under our existing methodology, the LTCH PPS wage index value for urban CBSAs with no IPPS wage data will be determined by using an average of all of the urban areas within the State, and the LTCH PPS wage index value for rural areas with no IPPS wage data will be determined by using the unweighted average of the wage indices from all of the CBSAs that are contiguous to the rural counties of the State.

We did not receive any public comments in response to our proposals. Therefore, we are finalizing our proposals, without modification.

Based on the FY 2015 IPPS wage data that we used to determine the FY 2019 LTCH PPS standard Federal payment rate area wage index values, there are no IPPS wage data for the urban area of Hinesville, GA (CBSA 25980). Consistent with the methodology discussed above, we calculated the FY 2019 wage index value for CBSA 25980 as the average of the wage index values for all of the other urban areas within the State of Georgia (that is, CBSAs 10500, 12020, 12060, 12260, 15260, 16860, 17980, 19140, 23580, 31420, 40660, 42340, 46660 and 47580), as shown in Table 12A, which is listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website). We note that, as IPPS wage data are dynamic, it is possible that urban areas without IPPS wage data will vary in the future.

Based on the FY 2015 IPPS wage data that we used to determine the FY 2019 LTCH PPS standard Federal payment rate area wage index values in this final rule, there

are no rural areas without IPPS hospital wage data. Therefore, it is not necessary to use our established methodology to calculate a LTCH PPS standard Federal payment rate wage index value for rural areas with no IPPS wage data for FY 2019. We note that, as IPPS wage data are dynamic, it is possible that the number of rural areas without IPPS wage data will vary in the future. The FY 2019 LTCH PPS standard Federal payment rate wage index values that will be applicable for LTCH PPS standard Federal payment rate discharges occurring on or after October 1, 2018, through September 30, 2019, are presented in Table 12A (for urban areas) and Table 12B (for rural areas), which are listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website.

#### 5. Budget Neutrality Adjustment for Changes to the LTCH PPS Standard Federal Payment Rate Area Wage Level Adjustment

Historically, the LTCH PPS wage index and labor-related share are updated annually based on the latest available data. Under § 412.525(c)(2), any changes to the area wage index values or labor-related share are to be made in a budget neutral manner such that estimated aggregate LTCH PPS payments are unaffected; that is, will be neither greater than nor less than estimated aggregate LTCH PPS payments without such changes to the area wage level adjustment. Under this policy, we determine an area wage-level adjustment budget neutrality factor that will be applied to the standard Federal payment rate to ensure that any changes to the area wage level adjustments are budget neutral such that any changes to the area wage index values or labor-related share would not result in any change (increase or decrease) in estimated aggregate LTCH PPS payments.

Accordingly, under § 412.523(d)(4), we apply an area wage level adjustment budget neutrality factor in determining the standard Federal payment rate, and we also established a methodology for calculating an area wage level adjustment budget neutrality factor. (For additional information on the establishment of our budget neutrality policy for changes to the area wage level adjustment, we refer readers to the FY 2012 IPPS/LTCH PPS final rule (76 FR 51771 through 51773 and 51809).)

In the FY 2019 IPS/LTCH PPS proposed rule, we set forth the proposed methodologies we would use to determine an area wage level adjustment budget factor that would be applied to the LTCH PPS standard Federal payment rate for FY 2019. We did not receive any public comments in response to our proposals. Therefore, we are finalizing our proposals, without modification

In this final rule, for FY 2019 LTCH PPS standard Federal payment rate cases, in accordance with § 412.523(d)(4), we are applying an area wage level adjustment budget neutrality factor to adjust the LTCH PPS standard Federal payment rate to account for the estimated effect of the adjustments or updates to the area wage level adjustment under § 412.525(c)(1) on estimated aggregate LTCH PPS payments using a methodology that is consistent with the methodology we established in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51773). Specifically, we determined an area wage level adjustment budget neutrality factor that will be applied to the LTCH PPS standard Federal payment rate under § 412.523(d)(4) for FY 2019 using the following methodology:

*Step 1*—We simulated estimated aggregate LTCH PPS standard Federal payment rate payments using the FY 2018 wage index values and the FY 2018 labor-related share

of 66.2 percent (as established in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38314 and 38315)).

*Step 2*—We simulated estimated aggregate LTCH PPS standard Federal payment rate payments using the FY 2019 wage index values (as shown in Tables 12A and 12B listed in the Addendum to this final rule and available via the Internet on the CMS website) and the FY 2019 labor-related share of 66.0 percent (based on the latest available data as previously discussed in this Addendum).

*Step 3*—We calculated the ratio of these estimated total LTCH PPS standard Federal payment rate payments by dividing the estimated total LTCH PPS standard Federal payment rate payments using the FY 2018 area wage level adjustments (calculated in Step 1) by the estimated total LTCH PPS standard Federal payment rate payments using the FY 2019 area wage level adjustments (calculated in Step 2) to determine the area wage level adjustment budget neutrality factor for FY 2019 LTCH PPS standard Federal payment rate payments.

*Step 4*—We then applied the FY 2019 area wage level adjustment budget neutrality factor from Step 3 to determine the FY 2019 LTCH PPS standard Federal payment rate after the application of the FY 2019 annual update (discussed previously in section V.A. of this Addendum).

We note that, with the exception of cases subject to the transitional blend payment rate provisions and certain temporary exemptions for certain spinal cord specialty hospitals and certain severe wound cases, under the dual rate LTCH PPS payment structure, only LTCH PPS cases that meet the statutory criteria to be excluded from the

site neutral payment rate (that is, LTCH PPS standard Federal payment rate cases) are paid based on the LTCH PPS standard Federal payment rate. Because the area wage level adjustment under § 412.525(c) is an adjustment to the LTCH PPS standard Federal payment rate, we only used data from claims that would have qualified for payment at the LTCH PPS standard Federal payment rate if such rate had been in effect at the time of discharge to calculate the FY 2019 LTCH PPS standard Federal payment rate area wage level adjustment budget neutrality factor described above.

For this final rule, using the steps in the methodology previously described, we determined a FY 2019 LTCH PPS standard Federal payment rate area wage level adjustment budget neutrality factor of 0.999713. Accordingly, in section V.A. of the Addendum to this final rule, to determine the FY 2019 LTCH PPS standard Federal payment rate, we are applying an area wage level adjustment budget neutrality factor of 0.999713, in accordance with § 412.523(d)(4). The FY 2019 LTCH PPS standard Federal payment rate shown in Table 1E of the Addendum to this final rule reflects this adjustment factor.

C. LTCH PPS Cost-of-Living Adjustment (COLA) for LTCHs Located in Alaska and Hawaii

Under § 412.525(b), a cost-of-living adjustment (COLA) is provided for LTCHs located in Alaska and Hawaii to account for the higher costs incurred in those States. Specifically, we apply a COLA to payments to LTCHs located in Alaska and Hawaii by multiplying the nonlabor-related portion of the standard Federal payment rate by the applicable COLA factors established annually by CMS. Higher labor-related costs for LTCHs located in Alaska and Hawaii are taken into account in the adjustment for area wage levels previously described. The methodology used to determine the COLA factors for Alaska and Hawaii is based on a comparison of the growth in the Consumer Price Indexes (CPIs) for Anchorage, Alaska, and Honolulu, Hawaii, relative to the growth in the CPI for the average U.S. city as published by the Bureau of Labor Statistics (BLS). It also includes a 25-percent cap on the CPI-updated COLA factors. Under our current policy, we update the COLA factors using the methodology described above every 4 years (at the same time as the update to the labor-related share of the IPPS market basket), and we last updated the COLA factors for Alaska and Hawaii published by OPM for 2009 in FY 2018 (82 FR 38539 through 38540).

We continue to believe that determining updated COLA factors using this methodology would appropriately adjust the nonlabor-related portion of the LTCH PPS standard Federal payment rate for LTCHs located in Alaska and Hawaii. Therefore, in the FY 2019 IPPS/LTCH PPS proposed rule, for FY 2019, under the broad authority conferred upon the Secretary by section 123 of the BBRA, as amended by section 307(b)

of the BIPA, to determine appropriate payment adjustments under the LTCH PPS, we proposed to continue to use the COLA factors based on the 2009 OPM COLA factors updated through 2016 by the comparison of the growth in the CPIs for Anchorage, Alaska, and Honolulu, Hawaii, relative to the growth in the CPI for the average U.S. city as established in the FY 2018 IPPS/LTCH PPS final rule. (For additional details on our current methodology for updating the COLA factors for Alaska and Hawaii and for a discussion on the FY 2018 COLA factors, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38539 through 38540).)

We did not receive any public comments on our proposal. Therefore, we are adopting our proposal, without modification. Consistent with our historical practice, we are establishing that the COLA factors shown in the following table will be used to adjust the nonlabor-related portion of the LTCH PPS standard Federal payment rate for LTCHs located in Alaska and Hawaii under § 412.525(b).

**COST-OF-LIVING ADJUSTMENT FACTORS FOR ALASKA AND HAWAII  
UNDER THE LTCH PPS FOR FY 2019**

Area	FY 2018 and FY 2019
Alaska:	
City of Anchorage and 80-kilometer (50-mile) radius by road	1.25
City of Fairbanks and 80-kilometer (50-mile) radius by road	1.25
City of Juneau and 80-kilometer (50-mile) radius by road	1.25
Rest of Alaska	1.25
City and County of Honolulu	1.25
County of Hawaii	1.21
County of Kauai	1.25
County of Maui and County of Kalawao	1.25

#### D. Adjustment for LTCH PPS High Cost Outlier (HCO) Cases

##### 1. HCO Background

From the beginning of the LTCH PPS, we have included an adjustment to account for cases in which there are extraordinarily high costs relative to the costs of most discharges. Under this policy, additional payments are made based on the degree to which the estimated cost of a case (which is calculated by multiplying the Medicare allowable covered charge by the hospital's overall hospital CCR) exceeds a fixed-loss amount. This policy results in greater payment accuracy under the LTCH PPS and the Medicare program, and the LTCH sharing the financial risk for the treatment of extraordinarily high-cost cases.

We retained the basic tenets of our HCO policy in FY 2016 when we implemented the dual rate LTCH PPS payment structure under section 1206 of Pub. L. 113-67. LTCH discharges that meet the criteria for exclusion from the site neutral payment rate (that is, LTCH PPS standard Federal payment rate cases) are paid at the LTCH PPS standard Federal payment rate, which includes, as applicable, HCO payments under § 412.523(e). LTCH discharges that do not meet the criteria for exclusion are paid at the site neutral payment rate, which includes, as applicable, HCO payments under § 412.522(c)(2)(i). In the FY 2016 IPPS/LTCH PPS final rule, we established separate fixed-loss amounts and targets for the two different LTCH PPS payment rates. Under this bifurcated policy, the historic 8-percent HCO target was retained for LTCH PPS standard Federal payment rate cases, with the fixed-loss amount

calculated using only data from LTCH cases that would have been paid at the LTCH PPS standard Federal payment rate if that rate had been in effect at the time of those discharges. For site neutral payment rate cases, we adopted the operating IPPS HCO target (currently 5.1 percent) and set the fixed-loss amount for site neutral payment rate cases at the value of the IPPS fixed-loss amount. Under the HCO policy for both payment rates, an LTCH receives 80 percent of the difference between the estimated cost of the case and the applicable HCO threshold, which is the sum of the LTCH PPS payment for the case and the applicable fixed-loss amount for such case.

In order to maintain budget neutrality, consistent with the budget neutrality requirement for HCO payments to LTCH PPS standard Federal rate payment cases, we also adopted a budget neutrality requirement for HCO payments to site neutral payment rate cases by applying a budget neutrality factor to the LTCH PPS payment for those site neutral payment rate cases. (We refer readers to § 412.522(c)(2)(i) of the regulations for further details.) We note that, during the 2-year transitional period, the site neutral payment rate HCO budget neutrality factor did not apply to the LTCH PPS standard Federal payment rate portion of the blended payment rate at § 412.522(c)(3) payable to site neutral payment rate cases. (For additional details on the HCO policy adopted for site neutral payment rate cases under the dual rate LTCH PPS payment structure, including the budget neutrality adjustment for HCO payments to site neutral payment rate cases, we refer readers to the FY 2016 IPPS/LTCH PPS final rule (80 FR 49617 through 49623).)

## 2. Determining LTCH CCRs under the LTCH PPS

### a. Background

As noted above, CCRs are used to determine payments for HCO adjustments for both payment rates under the LTCH PPS and also are used to determine payments for site neutral payment rate cases. As noted earlier, in determining HCO and the site neutral payment rate payments (regardless of whether the case is also an HCO), we generally calculate the estimated cost of the case by multiplying the LTCH's overall CCR by the Medicare allowable charges for the case. An overall CCR is used because the LTCH PPS uses a single prospective payment per discharge that covers both inpatient operating and capital-related costs. The LTCH's overall CCR is generally computed based on the sum of LTCH operating and capital costs (as described in Section 150.24, Chapter 3, of the Medicare Claims Processing Manual (Pub. 100-4)) as compared to total Medicare charges (that is, the sum of its operating and capital inpatient routine and ancillary charges), with those values determined from either the most recently settled cost report or the most recent tentatively settled cost report, whichever is from the latest cost reporting period. However, in certain instances, we use an alternative CCR, such as the statewide average CCR, a CCR that is specified by CMS, or one that is requested by the hospital. (We refer readers to § 412.525(a)(4)(iv) of the regulations for further details regarding HCO adjustments for either LTCH PPS payment rate and § 412.522(c)(1)(ii) for the site neutral payment rate.)

The LTCH's calculated CCR is then compared to the LTCH total CCR ceiling. Under our established policy, an LTCH with a calculated CCR in excess of the applicable

maximum CCR threshold (that is, the LTCH total CCR ceiling, which is calculated as 3 standard deviations from the national geometric average CCR) is generally assigned the applicable statewide CCR. This policy is premised on a belief that calculated CCRs above the LTCH total CCR ceiling are most likely due to faulty data reporting or entry, and CCRs based on erroneous data should not be used to identify and make payments for outlier cases.

b. LTCH Total CCR Ceiling

Consistent with our historical practice, as we proposed, we used the most recent data available to determine the LTCH total CCR ceiling for FY 2019 in this final rule. Specifically, in this final rule, using our established methodology for determining the LTCH total CCR ceiling based on IPPS total CCR data from the March 2018 update of the Provider Specific File (PSF), which is the most recent data available, we are establishing an LTCH total CCR ceiling of 1.27 under the LTCH PPS for FY 2019 in accordance with § 412.525(a)(4)(iv)(C)(2) for HCO cases under either payment rate and § 412.522(c)(1)(ii) for the site neutral payment rate. (For additional information on our methodology for determining the LTCH total CCR ceiling, we refer readers to the FY 2007 IPPS final rule (71 FR 48118 through 48119).

We did not receive any public comments on our proposals. Therefore, we are finalizing our proposals as described above, without modification.

c. LTCH Statewide Average CCRs

Our general methodology for determining the statewide average CCRs used under the LTCH PPS is similar to our established methodology for determining the LTCH total

CCR ceiling because it is based on “total” IPPS CCR data. (For additional information on our methodology for determining statewide average CCRs under the LTCH PPS, we refer readers to the FY 2007 IPPS final rule (71 FR 48119 through 48120).) Under the LTCH PPS HCO policy for cases paid under either payment rate at § 412.525(a)(4)(iv)(C)(2), the current SSO policy at § 412.529(f)(4)(iii)(B), and the site neutral payment rate at § 412.522(c)(1)(ii), the MAC may use a statewide average CCR, which is established annually by CMS, if it is unable to determine an accurate CCR for an LTCH in one of the following circumstances: (1) new LTCHs that have not yet submitted their first Medicare cost report (a new LTCH is defined as an entity that has not accepted assignment of an existing hospital's provider agreement in accordance with § 489.18); (2) LTCHs whose calculated CCR is in excess of the LTCH total CCR ceiling; and (3) other LTCHs for whom data with which to calculate a CCR are not available (for example, missing or faulty data). (Other sources of data that the MAC may consider in determining an LTCH's CCR include data from a different cost reporting period for the LTCH, data from the cost reporting period preceding the period in which the hospital began to be paid as an LTCH (that is, the period of at least 6 months that it was paid as a short-term, acute care hospital), or data from other comparable LTCHs, such as LTCHs in the same chain or in the same region.)

Consistent with our historical practice of using the best available data, in this final rule, using our established methodology for determining the LTCH statewide average CCRs, based on the most recent complete IPPS “total CCR” data from the March 2018 update of the PSF, as we proposed, we are establishing LTCH PPS statewide average

total CCRs for urban and rural hospitals that will be effective for discharges occurring on or after October 1, 2018, through September 30, 2019, in Table 8C listed in section VI. of the Addendum to this final rule (and available via the Internet on the CMS website).

Consistent with our historical practice, as we also proposed, we used more recent data to determine the LTCH PPS statewide average total CCRs for FY 2019 in this final rule.

Under the current LTCH PPS labor market areas, all areas in Delaware, the District of Columbia, New Jersey, and Rhode Island are classified as urban. Therefore, there are no rural statewide average total CCRs listed for those jurisdictions in Table 8C. This policy is consistent with the policy that we established when we revised our methodology for determining the applicable LTCH statewide average CCRs in the FY 2007 IPPS final rule (71 FR 48119 through 48121) and is the same as the policy applied under the IPPS. In addition, although Connecticut has areas that are designated as rural, in our calculation of the LTCH statewide average CCRs, there was no data available from short-term, acute care IPPS hospitals to compute a rural statewide average CCR or there were no short-term, acute care IPPS hospitals or LTCHs located in that area as of March 2018. Therefore, consistent with our existing methodology, as we proposed, we used the national average total CCR for rural IPPS hospitals for rural Connecticut in Table 8C. While Massachusetts also has rural areas, the statewide average CCR for rural areas in Massachusetts is based on one IPPS provider whose CCR is an atypical 1.215. Because this is much higher than the statewide urban average and furthermore implies costs exceeded charges, as with Connecticut, as we proposed, we used the national average total CCR for rural hospitals for hospitals located in rural Massachusetts.

Furthermore, consistent with our existing methodology, in determining the urban and rural statewide average total CCRs for Maryland LTCHs paid under the LTCH PPS, as we proposed, we are continuing to use, as a proxy, the national average total CCR for urban IPPS hospitals and the national average total CCR for rural IPPS hospitals, respectively. We are using this proxy because we believe that the CCR data in the PSF for Maryland hospitals may not be entirely accurate (as discussed in greater detail in the FY 2007 IPPS final rule (71 FR 48120)).

We did not receive any public comments on our proposals. Therefore, we are finalizing our proposals as described above, without modification.

d. Reconciliation of HCO Payments

Under the HCO policy for cases paid under either payment rate at § 412.525(a)(4)(iv)(D), the payments for HCO cases are subject to reconciliation. Specifically, any such payments are reconciled at settlement based on the CCR that was calculated based on the cost report coinciding with the discharge. For additional information on the reconciliation policy, we refer readers to Sections 150.26 through 150.28 of the Medicare Claims Processing Manual (Pub. 100-4), as added by Change Request 7192 (Transmittal 2111; December 3, 2010), and the RY 2009 LTCH PPS final rule (73 FR 26820 through 26821).

### 3. High-Cost Outlier Payments for LTCH PPS Standard Federal Payment Rate Cases

#### a. Changes to High-Cost Outlier Payments for LTCH PPS Standard Federal Payment Rate Cases

Under the regulations at § 412.525(a)(2)(ii) and as required by section 1886(m)(7) of the Act, the fixed-loss amount for HCO payments is set each year so that the estimated aggregate HCO payments for LTCH PPS standard Federal payment rate cases are 99.6875 percent of 8 percent (that is, 7.975 percent) of estimated aggregate LTCH PPS payments for LTCH PPS standard Federal payment rate cases. (For more details on the requirements for high-cost outlier payments in FY 2018 and subsequent years under section 1886(m)(7) of the Act and additional information regarding high-cost outlier payments prior to FY 2018, we refer readers to the FY 2018 IPPS/LTCH PPS final rule (82 FR 38542 through 38544).)

#### b. Establishment of the Fixed-Loss Amount for LTCH PPS Standard Federal Payment Rate Cases for FY 2019

When we implemented the LTCH PPS, we established a fixed-loss amount so that total estimated outlier payments are projected to equal 8 percent of total estimated payments under the LTCH PPS (67 FR 56022 through 56026). When we implemented the dual rate LTCH PPS payment structure beginning in FY 2016, we established that, in general, the historical LTCH PPS HCO policy would continue to apply to LTCH PPS standard Federal payment rate cases. That is, the fixed-loss amount and target for LTCH PPS standard Federal payment rate cases would be determined using the LTCH PPS HCO policy adopted when the LTCH PPS was first implemented, but we limited the data

used under that policy to LTCH cases that would have been LTCH PPS standard Federal payment rate cases if the statutory changes had been in effect at the time of those discharges.

To determine the applicable fixed-loss amount for LTCH PPS standard Federal payment rate cases, we estimate outlier payments and total LTCH PPS payments for each LTCH PPS standard Federal payment rate case (or for each case that would have been a LTCH PPS standard Federal payment rate case if the statutory changes had been in effect at the time of the discharge) using claims data from the MedPAR files. In accordance with § 412.525(a)(2)(ii), the applicable fixed-loss amount for LTCH PPS standard Federal payment rate cases results in estimated total outlier payments being projected to be equal to 7.975 percent of projected total LTCH PPS payments for LTCH PPS standard Federal payment rate cases. We use MedPAR claims data and CCRs based on data from the most recent PSF (or from the applicable statewide average CCR if an LTCH's CCR data are faulty or unavailable) to establish an applicable fixed-loss threshold amount for LTCH PPS standard Federal payment rate cases.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20595), we proposed to continue to use our current methodology to calculate an applicable fixed-loss amount for LTCH PPS standard Federal payment rate cases for FY 2019 using the best available data that would maintain estimated HCO payments at the projected 7.975 percent of total estimated LTCH PPS payments for LTCH PPS standard Federal payment rate cases (based on the payment rates and policies for these cases presented in that proposed rule).

Specifically, based on the most recent complete LTCH data available at that time (that is, LTCH claims data from the December 2017 update of the FY 2017 MedPAR file and CCRs from the December 2017 update of the PSF), we determined a proposed fixed-loss amount for LTCH PPS standard Federal payment rate cases for FY 2019 of \$30,639 that would result in estimated outlier payments projected to be equal to 7.975 percent of estimated FY 2019 payments for such cases. Under this proposal, we would continue to make an additional HCO payment for the cost of an LTCH PPS standard Federal payment rate case that exceeds the HCO threshold amount that is equal to 80 percent of the difference between the estimated cost of the case and the outlier threshold (the sum of the adjusted LTCH PPS standard Federal payment rate payment and the fixed-loss amount for LTCH PPS standard Federal payment rate cases of \$30,639).

Comment: Several commenters expressed concerns with the proposed fixed-loss amount for HCO cases paid under the LTCH PPS standard Federal payment rate, noting that the proposed fixed-loss amount, 11.9 percent greater than the fixed-loss amount in FY 2018, is the third consecutive year with a greater than 10-percent increase. Moreover, some commenters noted that the provider data used for the proposed rule included one new provider with a CCR of 1.029 which accounted for 2.65 percent of all outlier payments, despite accounting for only 0.116 percent of all LTCH PPS standard Federal payment rate cases. Commenters attributed approximately \$1,100 of the proposed increase to the fixed-loss amount to this one provider.

Response: In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20595), we noted that the proposed fixed-loss amount for HCO cases paid under the LTCH PPS

standard Federal payment rate in FY 2019 of \$30,639 is higher than the FY 2018 fixed-loss amount of \$27,381 for LTCH PPS standard Federal payment rate cases. However, based on the most recent available data at the time of the development of the proposed rule, we found that the current FY 2018 HCO threshold of \$27,381 results in estimated HCO payments for LTCH PPS standard Federal payment rate cases of approximately 7.988 percent of the estimated total LTCH PPS payments in FY 2018, which exceeds the 7.975 percent target by 0.01 percentage points.

As described in the FY 2019 IPPS/LTCH PPS proposed rule (82 FR 20595), we used CCRs from the December 2017 update of the PSF as they were the best available data at that time, which included the provider with a CCR of 1.029 as point out by some commenters. We note that while a CCR over 1.0 is generally considered high, and is significantly higher than prior CCRs for that provider, a CCR of 1.029 is within the current CCR ceiling of 1.280 established in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38541). In addition, that provider's CCR was in the PSF with an effective date of July 1, 2016 and, therefore, was the CCR used to determine that provider's LTCH PPS payments (such as outliers and site neutral payment rate payments) until it was updated with an effective date of January 1, 2018, which, as anticipated by some commenters, has resulted in lowering the fixed-loss amount for FY 2019 as compared to the proposed FY 2019 fixed-loss amount of \$30,639 (as described in more detail below). For these reasons, we did not believe it was inappropriate to use that provider's CCR for the calculations in the proposed rule.

Consistent with our historical practice of using the best data available, as we proposed, for this final rule we are using the best available data, including CCRs from the March 2018 update of the PSF as described below. We note that the CCR for the provider noted by the commenters has decreased from 1.029 to 0.323, which we used for the calculations in this final rule.

Comment: A few commenters requested that CMS provide more information regarding the fixed-loss amount for HCO cases paid under the LTCH PPS standard Federal payment rate, specifically requesting the charge inflation factor for LTCH PPS standard Federal payment rate cases and an explanation on its calculation.

Response: We regret the inadvertent omission of the 2-year inflation factor from FY 2017 to FY 2019 in the FY 2019 IPPS/LTCH PPS proposed rule. Consistent with our historical approach, in the proposed rule we applied a factor based on IGI's most recent estimate of the 2013-based LTCH market basket increase from FY 2017 to FY 2019, which, at that time, was 5.3 percent. For this FY 2019 IPPS/LTCH PPS final rule, based on the Office of Actuary's most recent second quarter 2018 forecast of the 2013-based of the LTCH market basket increase from FY 2017 to FY 2019, we are using an inflation factor of 5.7 percent.

Comment: One commenter stated that, with the increasing the fixed-loss amount for HCO cases paid under the LTCH PPS standard Federal payment rate over the past 5 years, the "additional 'days of losses' covered by the HCO amount is now approaching 10 days", and requested that CMS evaluate if the 8-percent outlier target is satisfactory under the LTCH PPS.

Response: We agree that an increase in the HCO amount can lead to an increase in the “days of losses.” However, a change to the HCO payment target for LTCH PPS standard Federal payment rate cases can only be accomplished through statute. Specifically, section 1886(m)(7) of the Act, requires that the fixed-loss amount for HCO payments is set each year so that the estimated aggregate HCO payments for LTCH PPS standard Federal payment rate cases are 99.6875 percent of 8 percent (that is, 7.975 percent) of estimated aggregate LTCH PPS payments for LTCH PPS standard Federal payment rate cases.

Consistent with our historical practice of using the best data available, as we proposed, when determining the fixed-loss amount for LTCH PPS standard Federal payment rate cases for FY 2019 in this final rule, we used the most recent available LTCH claims data and CCR data. In this FY 2019 IPPS/LTCH PPS final rule, we are continuing to use our current methodology to calculate an applicable fixed-loss amount for LTCH PPS standard Federal payment rate cases for FY 2019 using the best available data that will maintain estimated HCO payments at the projected 7.975 percent of total estimated LTCH PPS payments for LTCH PPS standard Federal payment rate cases (based on the payment rates and policies for these cases presented in this final rule). Specifically, based on the most recent complete LTCH data available at this time (that is, LTCH claims data from the March 2018 update of the FY 2017 MedPAR file and CCRs from the March 2018 update of the PSF), we determined a fixed-loss amount for LTCH PPS standard Federal payment rate cases for FY 2019 of \$27,124 that will result in estimated outlier payments projected to be equal to 7.975 percent of estimated FY 2019

payments for such cases. Under the broad authority of section 123(a)(1) of the BBRA and section 307(b)(1) of the BIPA, we are establishing a fixed-loss amount of \$27,124 for LTCH PPS standard Federal payment rate cases for FY 2019. Under this policy, we would continue to make an additional HCO payment for the cost of an LTCH PPS standard Federal payment rate case that exceeds the HCO threshold amount that is equal to 80 percent of the difference between the estimated cost of the case and the outlier threshold (the sum of the adjusted LTCH PPS standard Federal payment rate payment and the fixed-loss amount for LTCH PPS standard Federal payment rate cases of \$27,124).

We note that the fixed-loss amount for HCO cases paid under the LTCH PPS standard Federal payment rate in FY 2019 of \$27,124 is significantly lower than proposed FY 2019 fixed-loss amount of \$30,639, and slightly lower than the FY 2018 fixed-loss amount for LTCH PPS standard Federal payment rate cases of \$27,381. This decrease is primarily attributable to the updated CCRs used for this final rule, including the provider discussed above whose CCR decreased from 1.029 to 0.323.

Based on the most recent available data at the time of this final rule, we found that the current FY 2018 HCO threshold of \$27,381 results in estimated HCO payments for LTCH PPS standard Federal payment rate cases of approximately 7.4 percent of the estimated total LTCH PPS payments in FY 2018, which is below the 7.975 percent target by approximately 0.6 percentage points. We also note the change in our estimate of FY 2018 HCO payments between the proposed and final rule decreased from 8.0 percent to 7.4 percent, and this change is largely attributable to updates to CCRs, from the

December 2017 update of the PSF to the March 2018 update of the PSF and includes the provider discussed above whose CCR decreased from 1.029 to 0.323.

#### 4. High-Cost Outlier Payments for Site Neutral Payment Rate Cases

Under § 412.525(a), site neutral payment rate cases receive an additional HCO payment for costs that exceed the HCO threshold that is equal to 80 percent of the difference between the estimated cost of the case and the applicable HCO threshold (80 FR 49618 through 49629). In the following discussion, we note that the statutory transitional payment method for cases that are paid the site neutral payment rate for LTCH discharges occurring in cost reporting periods beginning during FY 2016 through FY 2019 uses a blended payment rate, which is determined as 50 percent of the site neutral payment rate amount for the discharge and 50 percent of the LTCH PPS standard Federal payment rate amount for the discharge (§ 412.522(c)(3)). As such, for FY 2019 discharges paid under the transitional payment method, the discussion below pertains only to the site neutral payment rate portion of the blended payment rate under § 412.522(c)(3)(i).

When we implemented the application of the site neutral payment rate in FY 2016, in examining the appropriate fixed-loss amount for site neutral payment rate cases issue, we considered how LTCH discharges based on historical claims data would have been classified under the dual rate LTCH PPS payment structure and the CMS' Office of the Actuary projections regarding how LTCHs will likely respond to our implementation of policies resulting from the statutory payment changes. We again relied on these considerations and actuarial projections in FY 2017 and FY 2018 because

the historical claims data available in each of these years were not all subject to the LTCH PPS dual rate payment system. Similarly, for FY 2019, we continue to rely on these considerations and actuarial projections because, due to the transitional blended payment policy for site neutral payment rate cases, FY 2017 claims for these cases were not subject to the full effect of the site neutral payment rate.

For FYs 2016 through 2018, at that time our actuaries projected that the proportion of cases that would qualify as LTCH PPS standard Federal payment rate cases versus site neutral payment rate cases under the statutory provisions would remain consistent with what is reflected in the historical LTCH PPS claims data. Although our actuaries did not project an immediate change in the proportions found in the historical data, they did project cost and resource changes to account for the lower payment rates. Our actuaries also projected that the costs and resource use for cases paid at the site neutral payment rate would likely be lower, on average, than the costs and resource use for cases paid at the LTCH PPS standard Federal payment rate and would likely mirror the costs and resource use for IPPS cases assigned to the same MS-DRG, regardless of whether the proportion of site neutral payment rate cases in the future remains similar to what is found based on the historical data. As discussed in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49619), this actuarial assumption is based on our expectation that site neutral payment rate cases would generally be paid based on an IPPS comparable per diem amount under the statutory LTCH PPS payment changes that began in FY 2016, which, in the majority of cases, is much lower than the payment that would have been paid if these statutory changes were not enacted. In light of these projections and

expectations, we discussed that we believed that the use of a single fixed-loss amount and HCO target for all LTCH PPS cases would be problematic. In addition, we discussed that we did not believe that it would be appropriate for comparable LTCH PPS site neutral payment rate cases to receive dramatically different HCO payments from those cases that would be paid under the IPPS (80 FR 49617 through 49619 and 81 FR 57305 through 57307). For those reasons, we stated that we believed that the most appropriate fixed-loss amount for site neutral payment rate cases for FYs 2016 through 2018 would be equal to the IPPS fixed-loss amount for that particular fiscal year. Therefore, we established the fixed-loss amount for site neutral payment rate cases as the corresponding IPPS fixed-loss amounts for FYs 2016 through 2018. In particular, in FY 2018, we established the fixed-loss amount for site neutral payment rate cases as the FY 2018 IPPS fixed-loss amount of \$26,537 (82 FR 46145).

As noted earlier, because not all claims in the data used for this final rule were subject to the site neutral payment rate, we continue to rely on the same considerations and actuarial projections used in FYs 2016 through 2018 when developing a fixed-loss amount for site neutral payment rate cases for FY 2019. Because our actuaries continue to project that site neutral payment rate cases in FY 2019 will continue to mirror an IPPS case paid under the same MS-DRG, we continue to believe that it would be inappropriate for comparable LTCH PPS site neutral payment rate cases to receive dramatically different HCO payments from those cases that would be paid under the IPPS. More specifically, as with FYs 2016 through 2018, our actuaries project that the costs and resource use for FY 2019 cases paid at the site neutral payment rate would likely be

lower, on average, than the costs and resource use for cases paid at the LTCH PPS standard Federal payment rate and will likely mirror the costs and resource use for IPPS cases assigned to the same MS-DRG, regardless of whether the proportion of site neutral payment rate cases in the future remains similar to what is found based on the historical data. (Based on the most recent FY 2017 LTCH claims data, approximately 64 percent of LTCH cases would have been paid the LTCH PPS standard Federal payment rate and approximately 36 percent of LTCH cases would have been paid the site neutral payment rate for discharges occurring in FY 2017.)

For these reasons, we continue to believe that the most appropriate fixed-loss amount for site neutral payment rate cases for FY 2019 is the IPPS fixed-loss amount for FY 2019. Therefore, consistent with past practice, in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20595 and 20596), for FY 2019, we proposed that the applicable HCO threshold for site neutral payment rate cases is the sum of the site neutral payment rate for the case and the IPPS fixed-loss amount. That is, we proposed a fixed-loss amount for site neutral payment rate cases of \$27,545, which is the same proposed FY 2019 IPPS fixed-loss amount discussed in section II.A.4.g.(1) of the Addendum to the proposed rule. We continue to believe that this policy would reduce differences between HCO payments for similar cases under the IPPS and site neutral payment rate cases under the LTCH PPS and promote fairness between the two systems. Accordingly, for FY 2019, we proposed to calculate a HCO payment for site neutral payment rate cases with costs that exceed the HCO threshold amount that is equal to 80 percent of the difference between the estimated cost of the case and the outlier threshold (the sum of the

proposed site neutral payment rate payment and the proposed fixed-loss amount for site neutral payment rate cases of \$27,545)

We did not receive any public comments on our proposals to use the FY 2019 IPPS fixed-loss amount and 5.1 percent HCO target for LTCH discharges paid at the site neutral payment rate in FY 2019. In this final rule, we are finalizing these proposals without modification.

Therefore, for FY 2019, as we proposed, we are establishing that the applicable HCO threshold for site neutral payment rate cases is the sum of the site neutral payment rate for the case and the IPPS fixed loss amount. That is, we are establishing a fixed-loss amount for site neutral payment rate cases of \$25,769, which is the same FY 2019 IPPS fixed-loss amount discussed in section II.A.4.g.(1). of the Addendum to this final rule. We continue to believe that this policy will reduce differences between HCO payments for similar cases under the IPPS and site neutral payment rate cases under the LTCH PPS and promote fairness between the two systems. Accordingly, under this policy, for FY 2019, we will calculate a HCO payment for site neutral payment rate cases with costs that exceed the HCO threshold amount, which is equal to 80 percent of the difference between the estimated cost of the case and the outlier threshold (the sum of site neutral payment rate payment and the fixed loss amount for site neutral payment rate cases of \$25,769).

In establishing a HCO policy for site neutral payment rate cases, we established a budget neutrality adjustment under § 412.522(c)(2)(i). We established this requirement because we believed, and continue to believe, that the HCO policy for site neutral

payment rate cases should be budget neutral, just as the HCO policy for LTCH PPS standard Federal payment rate cases is budget neutral, meaning that estimated site neutral payment rate HCO payments should not result in any change in estimated aggregate LTCH PPS payments.

To ensure that estimated HCO payments payable to site neutral payment rate cases in FY 2019 would not result in any increase in estimated aggregate FY 2019 LTCH PPS payments, under the budget neutrality requirement at § 412.522(c)(2)(i), it is necessary to reduce site neutral payment rate payments (or the portion of the blended payment rate payment for FY 2018 discharges occurring in LTCH cost reporting periods beginning before October 1, 2017) by 5.1 percent to account for the estimated additional HCO payments payable to those cases in FY 2019. In order to achieve this, for FY 2019, in general, as we proposed, we are continuing to use the policy adopted for FY 2018.

As discussed earlier, consistent with the IPPS HCO payment threshold, we estimate our fixed-loss threshold of \$25,769 results in HCO payments for site neutral payment rate cases to equal 5.1 percent of the site neutral payment rate payments that are based on the IPPS comparable per diem amount. As such, to ensure estimated HCO payments payable for site neutral payment rate cases in FY 2019 would not result in any increase in estimated aggregate FY 2019 LTCH PPS payments, under the budget neutrality requirement at § 412.522(c)(2)(i), it is necessary to reduce the site neutral payment rate amount paid under § 412.522(c)(1)(i) by 5.1 percent to account for the estimated additional HCO payments payable for site neutral payment rate cases in FY 2019. In order to achieve this, for FY 2019, we proposed to apply a budget neutrality

factor of 0.949 (that is, the decimal equivalent of a 5.1 percent reduction, determined as  $1.0 - 5.1/100 = 0.949$ ) to the site neutral payment rate for those site neutral payment rate cases paid under § 412.522(c)(1)(i). We noted that, consistent with the policy adopted for FY 2018, this proposed HCO budget neutrality adjustment would not be applied to the HCO portion of the site neutral payment rate amount (81 FR 57309).

Comment: As was the case in the FY 2016 through FY 2018 rulemaking cycles, commenters again objected to the proposed site neutral payment rate HCO budget neutrality adjustment, claiming that it results in savings to the Medicare program instead of being budget neutral. The commenters' primary objection was again based on their belief that, because the IPPS base rates used in the IPPS comparable per diem amount calculation of the site neutral payment rate include a budget neutrality adjustment for IPPS HCO payments (that is, a 5.1 percent adjustment on the operating IPPS standardized amount), an "additional" budget neutrality factor is not necessary and is, in fact, duplicative.

Response: We continue to disagree with the commenters that a budget neutrality adjustment for site neutral payment rate HCO payments is inappropriate, unnecessary, or duplicative. As we discussed in response to similar comments (82 FR 38545 through 38546, 81 FR 57308 through 57309, and 80 FR 49621 through 49622), we have the authority to adopt the site neutral payment rate HCO policy in a budget neutral manner. More importantly, we continue to believe this budget neutrality adjustment is appropriate for reasons outlined in our response to the nearly identical comments in the FY 2017

IPPS/LTCH PPS final rule (81 FR 57308 through 57309) and our response to similar comments in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49621 through 49622).

After consideration of the public comments we received, we are finalizing our proposal to apply a budget neutrality adjustment for HCO payments made to site neutral payment rate cases. Therefore, to ensure that estimated HCO payments payable to site neutral payment rate cases in FY 2019 will not result any increase in estimated aggregate FY 2019 LTCH PPS payments, under the budget neutrality requirement at § 412.522(c)(2)(i), it is necessary to reduce the site neutral payment rate portion of the blended rate payment by 5.1 percent to account for the estimated additional HCO payments payable to those cases in FY 2019. In order to achieve this, for FY 2019, in this final rule, as proposed, we are applying a budget neutrality factor of 0.949 (that is, the decimal equivalent of a 5.1 percent reduction, determined as  $1.0 - 5.1/100 = 0.949$ ) to the site neutral payment rate (without any applicable HCO payment).

E. Update to the IPPS Comparable Amount to Reflect the Statutory Changes to the IPPS DSH Payment Adjustment Methodology

In the FY 2014 IPPS/LTCH PPS final rule (78 FR 50766), we established a policy to reflect the changes to the Medicare IPPS DSH payment adjustment methodology made by section 3133 of the Affordable Care Act in the calculation of the “IPPS comparable amount” under the SSO policy at § 412.529 and the “IPPS equivalent amount” under the 25-percent threshold payment adjustment policy at § 412.534 and § 412.536.

Historically, the determination of both the “IPPS comparable amount” and the “IPPS equivalent amount” includes an amount for inpatient operating costs “for the costs of

“serving a disproportionate share of low-income patients.” Under the statutory changes to the Medicare DSH payment adjustment methodology that began in FY 2014, in general, eligible IPPS hospitals receive an empirically justified Medicare DSH payment equal to 25 percent of the amount they otherwise would have received under the statutory formula for Medicare DSH payments prior to the amendments made by the Affordable Care Act. The remaining amount, equal to an estimate of 75 percent of the amount that otherwise would have been paid as Medicare DSH payments, reduced to reflect changes in the percentage of individuals who are uninsured, is made available to make additional payments to each hospital that qualifies for Medicare DSH payments and that has uncompensated care. The additional uncompensated care payments are based on the hospital’s amount of uncompensated care for a given time period relative to the total amount of uncompensated care for that same time period reported by all IPPS hospitals that receive Medicare DSH payments.

To reflect the statutory changes to the Medicare DSH payment adjustment methodology in the calculation of the “IPPS comparable amount” and the “IPPS equivalent amount” under the LTCH PPS, we stated that we will include a reduced Medicare DSH payment amount that reflects the projected percentage of the payment amount calculated based on the statutory Medicare DSH payment formula prior to the amendments made by the Affordable Care Act that will be paid to eligible IPPS hospitals as empirically justified Medicare DSH payments and uncompensated care payments in that year (that is, a percentage of the operating Medicare DSH payment amount that has historically been reflected in the LTCH PPS payments that is based on IPPS rates). We

also stated that the projected percentage will be updated annually, consistent with the annual determination of the amount of uncompensated care payments that will be made to eligible IPPS hospitals. We believe that this approach results in appropriate payments under the LTCH PPS and is consistent with our intention that the “IPPS comparable amount” and the “IPPS equivalent amount” under the LTCH PPS closely resemble what an IPPS payment would have been for the same episode of care, while recognizing that some features of the IPPS cannot be translated directly into the LTCH PPS (79 FR 50766 through 50767).

For FY 2019, as discussed in greater detail in the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20596) as well as in section IV.F.3. of the preamble of this final rule, based on the most recent data available, our estimate of 75 percent of the amount that would otherwise have been paid as Medicare DSH payments (under the methodology outlined in section 1886(r)(2) of the Act) is adjusted to 67.51 percent of that amount to reflect the change in the percentage of individuals who are uninsured. The resulting amount is then used to determine the amount available to make uncompensated care payments to eligible IPPS hospitals in FY 2018. In other words, the amount of the Medicare DSH payments that would have been made prior to the amendments made by the Affordable Care Act will be adjusted to 50.63 percent (the product of 75 percent and 67.51 percent) and the resulting amount will be used to calculate the uncompensated care payments to eligible hospitals. As a result, for FY 2019, we projected that the reduction in the amount of Medicare DSH payments pursuant to section 1886(r)(1) of the Act, along with the payments for uncompensated care under section 1886(r)(2) of the Act, will

result in overall Medicare DSH payments of 75.63 percent of the amount of Medicare DSH payments that would otherwise have been made in the absence of the amendments made by the Affordable Care Act (that is, 25 percent + 50.63 percent = 75.63 percent).

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20596), for FY 2019, we proposed to establish that the calculation of the “IPPS comparable amount” under § 412.529 would include an applicable operating Medicare DSH payment amount that is equal to 75.63 percent of the operating Medicare DSH payment amount that would have been paid based on the statutory Medicare DSH payment formula absent the amendments made by the Affordable Care Act. Furthermore, consistent with our historical practice, we proposed that if more recent data became available, if appropriate, we would use that data to determine this factor in this final rule.

We did not receive any public comments in response to our proposal. In addition, there are no more recent data available to use that would affect the calculations determined in the proposed rule. Therefore, we are finalizing our proposal that, for FY 2019, the calculation of the “IPPS comparable amount” under § 412.529 includes an applicable operating Medicare DSH payment amount that is equal to 75.63 percent of the operating Medicare DSH payment amount that would have been paid based on the statutory Medicare DSH payment formula absent the amendments made by the Affordable Care Act. (We note that we also proposed that the “IPPS equivalent amount” under § 412.538 would include an applicable operating Medicare DSH payment amount that is equal to 75.63 percent of the operating Medicare DSH payment amount that would have been paid based on the statutory Medicare DSH payment formula absent the

amendments made by the Affordable Care Act. However, as discussed in section VII.E. of the preamble of this final rule, we are finalizing our proposal to remove the provisions of § 412.538, and reserving this section.)

#### F. Computing the Adjusted LTCH PPS Federal Prospective Payments for FY 2019

Section 412.525 sets forth the adjustments to the LTCH PPS standard Federal payment rate. Under the dual rate LTCH PPS payment structure, only LTCH PPS cases that meet the statutory criteria to be excluded from the site neutral payment rate are paid based on the LTCH PPS standard Federal payment rate. Under § 412.525(c), the LTCH PPS standard Federal payment rate is adjusted to account for differences in area wages by multiplying the labor-related share of the LTCH PPS standard Federal payment rate for a case by the applicable LTCH PPS wage index (the FY 2019 values are shown in Tables 12A through 12B listed in section VI. of the Addendum to this final rule and are available via the Internet on the CMS website). The LTCH PPS standard Federal payment rate is also adjusted to account for the higher costs of LTCHs located in Alaska and Hawaii by the applicable COLA factors (the FY 2019 factors are shown in the chart in section V.C. of this Addendum) in accordance with § 412.525(b). In this final rule, as we proposed, we are establishing an LTCH PPS standard Federal payment rate for FY 2019 of \$41,579.65, as discussed in section V.A. of the Addendum to this final rule. We illustrate the methodology to adjust the LTCH PPS standard Federal payment rate for FY 2019 in the following example:

Example:

During FY 2019, a Medicare discharge that meets the criteria to be excluded from the site neutral payment rate, that is, an LTCH PPS standard Federal payment rate case, is from an LTCH that is located in Chicago, Illinois (CBSA 16974). The FY 2019 LTCH PPS wage index value for CBSA 16974 is 1.0511 (obtained from Table 12A listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website). The Medicare patient case is classified into MS-LTC-DRG 189 (Pulmonary Edema & Respiratory Failure), which has a relative weight for FY 2019 of 0.9583 (obtained from Table 11 listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website). The LTCH submitted quality reporting data for FY 2019 in accordance with the LTCH QRP under section 1886(m)(5) of the Act.

To calculate the LTCH's total adjusted Federal prospective payment for this Medicare patient case in FY 2019, we computed the wage-adjusted Federal prospective payment amount by multiplying the unadjusted FY 2019 LTCH PPS standard Federal payment rate (\$ 41,579.65) by the labor-related share (66.0 percent) and the wage index value (1.0511). This wage-adjusted amount was then added to the nonlabor-related portion of the unadjusted LTCH PPS standard Federal payment rate (34.0 percent; adjusted for cost of living, if applicable) to determine the adjusted LTCH PPS standard Federal payment rate, which is then multiplied by the MS-LTC-DRG relative weight (0.9583) to calculate the total adjusted LTCH PPS standard Federal prospective payment

for FY 2019 (\$41,189.62). The table below illustrates the components of the calculations in this example.

Unadjusted LTCH PPS Standard Federal Prospective Payment Rate	\$41,579.65
Labor-Related Share	x 0.660
Labor-Related Portion of the LTCH PPS Standard Federal Payment Rate	= \$27,442.57
Wage Index (CBSA 16974)	x 1.0511
Wage-Adjusted Labor Share of LTCH PPS Standard Federal Payment Rate	= \$28,844.89
Nonlabor-Related Portion of the LTCH PPS Standard Federal Payment Rate (\$41,579.65 x 0.340)	+ \$14,137.08
Adjusted LTCH PPS Standard Federal Payment Amount	= \$42,981.97
MS-LTC-DRG 189 Relative Weight	x 0.9583
Total Adjusted LTCH PPS Standard Federal Prospective Payment	= \$41,189.62

## **VI. Tables Referenced in this Rule Generally Available through the Internet on the CMS Website**

This section lists the tables referred to throughout the preamble of this final rule and in the Addendum. In the past, a majority of these tables were published in the **Federal Register**, as part of the annual proposed and final rules. However, similar to FYs 2012 through 2018, for the FY 2019 rulemaking cycle, the IPPS and LTCH PPS tables will not be published in the **Federal Register** in the annual IPPS/LTCH PPS proposed and final rules and will be available through the Internet. Specifically, all IPPS tables listed below, with the exception of IPPS Tables 1A, 1B, 1C, and 1D, and LTCH PPS Table 1E, will generally be available through the Internet. IPPS Tables 1A, 1B, 1C, and 1D, and LTCH PPS Table 1E are displayed at the end of this section and will continue to be published in the **Federal Register**, as part of the annual proposed and final rules.

As discussed in the FY 2016 IPPS/LTCH PPS final rule (80 FR 49807), we streamlined and consolidated the wage index tables for FY 2016 and subsequent fiscal years.

As discussed in section III. J. of the preamble to this FY 2019 IPPS/LTCH PPS final rule, we are adding a new Table 4, “List of Counties Eligible for the Out-Migration Adjustment under Section 1886(d)(13) of the Act—FY 2019,” associated with this final rule. This table consists of the following: a list of counties that are eligible for the out-migration adjustment for FY 2019 identified by FIPS county code, the FY 2019 out-migration adjustment, and the number of years the adjustment will be in effect. We

believe this new table will make the information more transparent and provide the public with easier access to this information. We intend to make the information available annually, via Table 4 in the IPPS/LTCH PPS proposed and final rules, and are including it among the tables associated with this FY 2019 IPPS/LTCH PPS final rule that are available via the Internet on the CMS website.

As discussed in sections II.F.13., II.F.15.b. and d., II.F.16., and II.F.18. of the preamble of this final rule, we have developed the following ICD-10-CM and ICD-10-PCS code tables for FY 2019: Table 6A.—New Diagnosis Codes; Table 6B.—New Procedure Codes; Table 6C.—Invalid Diagnosis Codes; Table 6D.—Invalid Procedure Codes; Table 6E.—Revised Diagnosis Code Titles; Table 6F.—Revised Procedure Code Titles; Table 6G.1.—Secondary Diagnosis Order Additions to the CC Exclusion List; Table 6G.2.—Principal Diagnosis Order Additions to the CC Exclusion List; Table 6H.1.—Secondary Diagnosis Order Deletions to the CC Exclusion List; Table 6H.2.—Principal Diagnosis Order Deletions to the CC Exclusion List; Table 6I.—Complete MCC List; Table 6I.1.—Additions to the MCC List; Table 6I.2.—Deletions to the MCC List; Table 6J.—Complete CC List; Table 6J.1.—Additions to the CC List; Table 6J.2.—Deletions to the CC List; Table 6K.—Complete List of CC Exclusions; and Table 6P.—ICD-10-CM and ICD-10-PCS Codes for MS-DRG Changes. Table 6P contains multiple tables, 6P.1c. through 6P.1f., that include the ICD-10-CM and ICD-10-PCS code lists relating to specific MS-DRG changes.

In addition, under the HAC Reduction Program, established by section 3008 of the Affordable Care Act, a hospital's total payment may be reduced by 1 percent if it is in

the lowest HAC performance quartile. However, as discussed in section IV.K. of the preamble of this final rule, we are not providing the hospital-level data as a table associated with this final rule. The hospital-level data for the FY 2019 HAC Reduction Program will be made publicly available once it has undergone the review and corrections process.

As discussed in section II.H.1. of the preamble of this final rule, Table 10 that we have released in prior fiscal years contained the thresholds that we use to evaluate applications for new medical service and technology add-on payments for the fiscal year that follows the fiscal year that is otherwise the subject of the rulemaking. In an effort to clarify for the public that the listed thresholds will be used for new technology add-on payment applications for the next fiscal year (in this case, for FY 2020) rather than the fiscal year that is otherwise the subject of the rulemaking (in this case, for FY 2019), we are providing the thresholds previously included in Table 10 as one of the publicly available data files posted via the Internet on the CMS website for the rulemaking for the upcoming fiscal year at: <http://www.cms.hhs.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>, which is the same URL where the impact data files associated with the rulemaking for the applicable fiscal year are posted. We refer readers to section II.H.1. of the preamble of this final rule regarding our inclusion of the thresholds previously included in Table 10 as one of our public data files.

As discussed in section VII.B of the preamble of this final rule, in previous fiscal years, Table 13A.—Composition of Low-Volume Quintiles for MS-LTC-DRGs (which was listed in section VI. of the Addendum to the proposed and final rules and available

via the Internet on the CMS website) listed the composition of the low-volume quintiles for MS-LTC-DRGs for the respective year, and Table 13B.—No Volume MS-LTC-DRG Crosswalk (also listed in section VI. of the Addendum to the proposed and final rules and available via the Internet on the CMS website) listed the no-volume MS-LTC-DRGs and the MS-LTC-DRGs to which each was cross-walked (that is, the cross-walked MS-LTC-DRGs). The information contained in Tables 13A and 13B is used in the development of Table 11.—MS-LTC-DRGs, Relative Weights, Geometric Average Length of Stay, and Short-Stay Outlier (SSO) Threshold for LTCH PPS Discharges, which contains the MS-LTC-DRGs and their respective relative weights, geometric mean length of stay, and five-sixths of the geometric mean length of stay (used to identify SSO cases) for the respective fiscal year (and also is listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS website). Because the information contained in Tables 13A and 13B does not contain payment rates or factors for the applicable payment year, we are generally providing the data previously published in Tables 13A and 13B for each annual proposed rule and final rule as one of our supplemental data files via the Internet on the CMS website for the respective rule and fiscal year (that is, FY 2019 and subsequent fiscal years) at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/LongTermCareHospitalPPS/index.html> (that is, the same URL address where the impact data files associated with the rule are posted). To streamline the information made available to the public that is used in the annual development of Table 11, we believe that this change in the presentation of the information contained in Tables 13A

and 13B will make it easier for the public to navigate and find the relevant data and information used for the development of payment rates or factors for the applicable payment year, while continuing to furnish the same information contained in the tables provided in previous fiscal years.

As discussed in section IV.H. of the preamble of this final rule, the final FY 2019 readmissions payment adjustment factors, which are typically included in Table 15 of the final rule, are not available at this time because hospitals have not yet had the opportunity to review and correct the data (program calculations based on the FY 2019 applicable period of July 1, 2014 to June 30, 2017) before the data are made public under our policy regarding the reporting of hospital-specific data. After hospitals have been given an opportunity to review and correct their calculations for FY 2019, we will post Table 15 (which will be available via the Internet on the CMS website) to display the final FY 2019 readmissions payment adjustment factors that will be applicable to discharges occurring on or after October 1, 2018. We expect Table 15 will be posted on the CMS website in the fall of 2018.

In addition, Table 18 associated with this final rule contains the Factor 3 for purposes of determining the FY 2019 uncompensated care payment for all hospitals and identifies whether or not a hospital is projected to receive Medicare DSH payments and, therefore, eligible to receive the additional payment for uncompensated care for FY 2019. A hospital's Factor 3 determines the proportion of the aggregate amount available for uncompensated care payments that a Medicare DSH eligible hospital will receive under section 3133 of the Affordable Care Act.

Readers who experience any problems accessing any of the tables that are posted on the CMS websites identified below should contact Michael Treitel at (410) 786-4552.

The following IPPS tables for this final rule are generally available through the Internet on the CMS website at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>. Click on the link on the left side of the screen titled, “FY 2019 IPPS Final Rule Home Page” or “Acute Inpatient--Files for Download.”

Table 2.—Case-Mix Index and Wage Index Table by CCN—FY 2019

Table 3.—Wage Index Table by CBSA—FY 2019

Table 4.—List of Counties Eligible for the Out-Migration Adjustment under Section 1886(d)(13) of the Act—FY 2019

Table 5.—List of Medicare Severity Diagnosis-Related Groups (MS-DRGs), Relative Weighting Factors, and Geometric and Arithmetic Mean Length of Stay—FY 2019

Table 6A.—New Diagnosis Codes--FY 2019

Table 6B.—New Procedure Codes--FY 2019

Table 6C.—Invalid Diagnosis Codes--FY 2019

Table 6D.—Invalid Procedure Codes--FY 2019

Table 6E.—Revised Diagnosis Code Titles--FY 2019

Table 6F.—Revised Procedure Code Titles--FY 2019

Table 6G.1.—Secondary Diagnosis Order Additions to the CC Exclusions List--FY 2019

Table 6G.2.—Principal Diagnosis Order Additions to the CC Exclusions List--  
FY 2019

Table 6H.1.—Secondary Diagnosis Order Deletions to the CC Exclusions List--  
FY 2019

Table 6H.2.—Principal Diagnosis Order Deletions to the CC Exclusions List--  
FY 2019

Table 6I.--Complete MCC List--FY 2019

Table 6I.1.—Additions to the MCC List--FY 2019

Table 6I.2.—Deletions to the MCC List--FY 2019

Table 6J.--Complete CC List--FY 2019

Table 6J.1.—Additions to the CC List--FY 2019

Table 6J.2.—Deletions to the CC List--FY 2019

Table 6K.--Complete List of CC Exclusions--FY 2019

Table 6P.—ICD-10-CM and ICD-10-PCS Codes for MS-DRG Changes—  
FY 2019

Table 7A.—Medicare Prospective Payment System Selected Percentile Lengths  
of Stay: FY 2017 MedPAR Update—March 2018 GROUPER V35.0 MS-DRGs

Table 7B.—Medicare Prospective Payment System Selected Percentile Lengths  
of Stay: FY 2017 MedPAR Update—March 2018 GROUPER V36.0 MS-DRGs

Table 8A.—FY 2019 Statewide Average Operating Cost-to-Charge Ratios  
(CCRs) for Acute Care Hospitals (Urban and Rural)

Table 8B.—FY 2019 Statewide Average Capital Cost-to-Charge Ratios (CCRs) for Acute Care Hospitals

Table 15.—FY 2019 Readmissions Adjustment Factors (We note that, as discussed earlier, Table 15 will be posted on the CMS website in the fall of 2018.)

Table 16A.—Updated Proxy Hospital Value-Based Purchasing (VBP) Program Adjustment Factors for FY 2019

Table 18.—FY 2019 Medicare DSH Uncompensated Care Payment Factor 3

The following LTCH PPS tables for this FY 2019 final rule are available through the Internet on the CMS website at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/LongTermCareHospitalPPS/index.html> under the list item for

Regulation Number CMS-1694-F:

Table 8C.—FY 2019 Statewide Average Total Cost-to-Charge Ratios (CCRs) for LTCHs (Urban and Rural)

Table 11.—MS-LTC-DRGs, Relative Weights, Geometric Average Length of Stay, and Short-Stay Outlier (SSO) Threshold for LTCH PPS Discharges Occurring from October 1, 2018 through September 30, 2019

Table 12A.—LTCH PPS Wage Index for Urban Areas for Discharges Occurring from October 1, 2018 through September 30, 2019

Table 12B.—LTCH PPS Wage Index for Rural Areas for Discharges Occurring from October 1, 2018 through September 30, 2019

**TABLE 1A.—NATIONAL ADJUSTED OPERATING STANDARDIZED AMOUNTS, LABOR/NONLABOR (68.3 PERCENT LABOR SHARE/ 31.7 PERCENT NONLABOR SHARE IF WAGE INDEX IS GREATER THAN 1)--FY 2019**

Hospital Submitted Quality Data and is a Meaningful EHR User (Update = 1.5 Percent)		Hospital Submitted Quality Data and is NOT a Meaningful EHR User (Update = -0.825 Percent)		Hospital Did NOT Submit Quality Data and is a Meaningful EHR User (Update = 0.625 Percent)		Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User (Update = -1.55 Percent)	
Labor	Nonlabor	Labor	Nonlabor	Labor	Nonlabor	Labor	Nonlabor
\$3,858.62	\$1,790.90	\$3,775.81	\$1,752.47	\$3,831.02	\$1,778.09	\$3,748.21	\$1,739.66

**TABLE 1B.—NATIONAL ADJUSTED OPERATING STANDARDIZED AMOUNTS, LABOR/NONLABOR (62 PERCENT LABOR SHARE/38 PERCENT NONLABOR SHARE IF WAGE INDEX IS LESS THAN OR EQUAL TO 1)— FY 2019**

Hospital Submitted Quality Data and is a Meaningful EHR User (Update = 1.35 Percent)		Hospital Submitted Quality Data and is NOT a Meaningful EHR User (Update = -0.825 Percent)		Hospital Did NOT Submit Quality Data and is a Meaningful EHR User (Update = 0.625 Percent)		Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User (Update = -1.55 Percent)	
Labor	Nonlabor	Labor	Nonlabor	Labor	Nonlabor	Labor	Nonlabor
\$3,502.70	\$2,146.82	\$3,427.53	\$2,100.75	\$3,477.65	\$2,131.46	\$3,402.48	\$2,085.39

**TABLE 1C.—ADJUSTED OPERATING STANDARDIZED AMOUNTS FOR HOSPITALS IN PUERTO RICO, LABOR/NONLABOR (NATIONAL: 62 PERCENT LABOR SHARE/38 PERCENT NONLABOR SHARE BECAUSE WAGE INDEX IS LESS THAN OR EQUAL TO 1);—FY 2019**

Standardized Amount	Rates if Wage Index is Greater Than 1		Rates if Wage Index is Less Than or Equal to 1	
	Labor	Nonlabor	Labor	Nonlabor
National <sup>1</sup>	Not Applicable	Not Applicable	\$3,502.70	\$2,146.82

<sup>1</sup>For FY 2019, there are no CBSAs in Puerto Rico with a national wage index greater than 1.

**TABLE 1D.—CAPITAL STANDARD FEDERAL PAYMENT RATE—FY 2019**

	Rate
National	\$459.72

**TABLE 1E.—LTCH PPS STANDARD FEDERAL PAYMENT RATE--FY 2019**

	Full Update (1.35 Percent)	Reduced Update* (-0.65 Percent)
Standard Federal Rate	\$41,579.65	\$40,759.12

\* For LTCHs that fail to submit quality reporting data for FY 2019 in accordance with the LTCH Quality Reporting Program (LTCH QRP), the annual update is reduced by 2.0 percentage points as required by section 1886(m)(5) of the Act.

## **Appendix A: Economic Analyses**

### **I. Regulatory Impact Analysis**

#### **A. Statement of Need**

This final rule is necessary in order to make payment and policy changes under the Medicare IPPS for Medicare acute care hospital inpatient services for operating and capital-related costs as well as for certain hospitals and hospital units excluded from the IPPS. This final rule also is necessary to make payment and policy changes for Medicare hospitals under the LTCH PPS. Also as we note below, the primary objective of the IPPS and the LTCH PPS is to create incentives for hospitals to operate efficiently and minimize unnecessary costs, while at the same time ensuring that payments are sufficient to adequately compensate hospitals for their legitimate costs in delivering necessary care to Medicare beneficiaries. In addition, we share national goals of preserving the Medicare Hospital Insurance Trust Fund.

We believe that the changes in this final rule, such as the updates to the IPPS and LTCH PPS rates, are needed to further each of these goals while maintaining the financial viability of the hospital industry and ensuring access to high quality health care for Medicare beneficiaries. We expect that these changes will ensure that the outcomes of the prospective payment systems are reasonable and equitable, while avoiding or minimizing unintended adverse consequences.

#### **B. Overall Impact**

We have examined the impacts of this final rule as required by Executive Order 12866 on Regulatory Planning and Review (September 30, 1993), Executive Order

13563 on Improving Regulation and Regulatory Review (January 18, 2011), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96-354), section 1102(b) of the Social Security Act, section 202 of the Unfunded Mandates Reform Act of 1995 (March 22, 1995; Pub. L. 104-4), Executive Order 13132 on Federalism (August 4, 1999), the Congressional Review Act (5 U.S.C. 804(2), and Executive Order 13771 on Reducing Regulation and Controlling Regulatory Costs (January 30, 2017).

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Section 3(f) of Executive Order 12866 defines a “significant regulatory action” as an action that is likely to result in a rule: (1) having an annual effect on the economy of \$100 million or more in any 1 year, or adversely and materially affecting a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities (also referred to as “economically significant”); (2) creating a serious inconsistency or otherwise interfering with an action taken or planned by another agency; (3) materially altering the budgetary impacts of entitlement grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raising novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

We have determined that this final rule is a major rule as defined in 5 U.S.C. 804(2). We estimate that the changes for FY 2019 acute care hospital operating

and capital payments will redistribute amounts in excess of \$100 million to acute care hospitals. The applicable percentage increase to the IPPS rates required by the statute, in conjunction with other payment changes in this final rule, will result in an estimated \$4.8 billion increase in FY 2019 payments, primarily driven by a combined \$4.4 billion increase in FY 2019 operating payments and uncompensated care payments, and a combined \$0.4 billion increase in FY 2019 capital payments, new technology add-on payments, and low-volume hospital payments. These changes are relative to payments made in FY 2018. The impact analysis of the capital payments can be found in section I.I. of this Appendix. In addition, as described in section I.J. of this Appendix, LTCHs are expected to experience an increase in payments by \$39 million in FY 2019 relative to FY 2018.

Our operating impact estimate includes the 0.5 percent adjustment required under section 414 of the MACRA applied to the IPPS standardized amount, as discussed in section II.D. of the preamble of this final rule. In addition, our operating payment impact estimate includes the 1.35 percent hospital update to the standardized amount (which includes the estimated 2.9 percent market basket update less 0.8 percentage point for the multifactor productivity adjustment and less 0.75 percentage point required under the Affordable Care Act). The estimates of IPPS operating payments to acute care hospitals do not reflect any changes in hospital admissions or real case-mix intensity, which will also affect overall payment changes.

The analysis in this Appendix, in conjunction with the remainder of this document, demonstrates that this final rule is consistent with the regulatory philosophy

and principles identified in Executive Orders 12866 and 13563, the RFA, and section 1102(b) of the Act. This final rule will affect payments to a substantial number of small rural hospitals, as well as other classes of hospitals, and the effects on some hospitals may be significant. Finally, in accordance with the provisions of Executive Order 12866, the Executive Office of Management and Budget has reviewed this final rule.

#### C. Objectives of the IPPS and the LTCH PPS

The primary objective of the IPPS and the LTCH PPS is to create incentives for hospitals to operate efficiently and minimize unnecessary costs, while at the same time ensuring that payments are sufficient to adequately compensate hospitals for their legitimate costs in delivering necessary care to Medicare beneficiaries. In addition, we share national goals of preserving the Medicare Hospital Insurance Trust Fund.

We believe that the changes in this final rule will further each of these goals while maintaining the financial viability of the hospital industry and ensuring access to high quality health care for Medicare beneficiaries. We expect that these changes will ensure that the outcomes of the prospective payment systems are reasonable and equitable, while avoiding or minimizing unintended adverse consequences.

Because this final rule contains a range of policies, we refer readers to the section of the final rule where each policy is discussed. These sections include the rationale for our decisions, including the need for the policy.

#### D. Limitations of Our Analysis

The following quantitative analysis presents the projected effects of our policy changes, as well as statutory changes effective for FY 2019, on various hospital groups.

We estimate the effects of individual policy changes by estimating payments per case, while holding all other payment policies constant. We use the best data available, but, generally unless specifically indicated, we do not attempt to make adjustments for future changes in such variables as admissions, lengths of stay, case-mix, changes to the Medicare population, or incentives. In addition, we discuss limitations of our analysis for specific policies in the discussion of those policies as needed.

#### E. Hospitals Included in and Excluded from the IPPS

The prospective payment systems for hospital inpatient operating and capital-related costs of acute care hospitals encompass most general short-term, acute care hospitals that participate in the Medicare program. There were 29 Indian Health Service hospitals in our database, which we excluded from the analysis due to the special characteristics of the prospective payment methodology for these hospitals. Among other short-term, acute care hospitals, hospitals in Maryland are paid in accordance with the Maryland All-Payer Model, and hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, 5 short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa) receive payment for inpatient hospital services they furnish on the basis of reasonable costs, subject to a rate-of-increase ceiling.

As of July 2018, there were 3,256 IPPS acute care hospitals included in our analysis. This represents approximately 54 percent of all Medicare-participating hospitals. The majority of this impact analysis focuses on this set of hospitals. There also are approximately 1,398 CAHs. These small, limited service hospitals are paid on

the basis of reasonable costs, rather than under the IPPS. IPPS-excluded hospitals and units, which are paid under separate payment systems, include IPFs, IRFs, LTCHs, RNHCIs, children's hospitals, 11 cancer hospitals, extended neoplastic disease care hospitals, and 5 short-term acute care hospitals located in the Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa. Changes in the prospective payment systems for IPFs and IRFs are made through separate rulemaking. Payment impacts of changes to the prospective payment systems for these IPPS-excluded hospitals and units are not included in this final rule. The impact of the update and policy changes to the LTCH PPS for FY 2019 is discussed in section I.J. of this Appendix.

#### F. Effects on Hospitals and Hospital Units Excluded From the IPPS

As of July 2018, there were 98 children's hospitals, 11 cancer hospitals, 5 short-term acute care hospitals located in the Virgin Islands, Guam, the Northern Mariana Islands and American Samoa, 1 extended neoplastic disease care hospital, and 18 RNHCIs being paid on a reasonable cost basis subject to the rate-of-increase ceiling under § 413.40. (In accordance with § 403.752(a) of the regulation, RNHCIs are paid under § 413.40.) Among the remaining providers, 280 rehabilitation hospitals and 846 rehabilitation units, and approximately 417 LTCHs, are paid the Federal prospective per discharge rate under the IRF PPS and the LTCH PPS, respectively, and 538 psychiatric hospitals and 1,084 psychiatric units are paid the Federal per diem amount under the IPF PPS. As stated previously, IRFs and IPFs are not affected by the rate updates discussed in this final rule. The impacts of the changes on LTCHs are discussed in section I.J. of this Appendix.

For children's hospitals, the 11 cancer hospitals, the 5 short-term acute care hospitals located in the Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa, extended neoplastic disease care hospitals, and RNHCIs, the update of the rate-of-increase limit (or target amount) is the estimated FY 2019 percentage increase in the 2014-based IPPS operating market basket, consistent with section 1886(b)(3)(B)(ii) of the Act, and §§ 403.752(a) and 413.40 of the regulations. Consistent with current law, based on IGI's 2018 second quarter forecast of the 2014-based IPPS market basket increase, we are estimating the FY 2019 update to be 2.9 percent (that is, the estimate of the market basket rate-of-increase). We used the most recent data available for this final rule to calculate the IPPS operating market basket update for FY 2019. However, the Affordable Care Act requires an adjustment for multifactor productivity (0.8 percentage point for FY 2019) and a 0.75 percentage point reduction to the market basket update, resulting in a 1.35 percent applicable percentage increase for IPPS hospitals that submit quality data and are meaningful EHR users, as discussed in section IV.B. of the preamble of this final rule. Children's hospitals, the 11 cancer hospitals, the 5 short-term acute care hospitals located in the Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa, extended neoplastic disease care hospitals, and RNHCIs that continue to be paid based on reasonable costs subject to rate-of-increase limits under § 413.40 of the regulations are not subject to the reductions in the applicable percentage increase required under the Affordable Care Act. Therefore, for those hospitals paid under § 413.40 of the regulations, the update is the percentage increase in the 2014-based IPPS

operating market basket for FY 2019, estimated at 2.9 percent, without the reductions described previously under the Affordable Care Act.

The impact of the update in the rate-of-increase limit on those excluded hospitals depends on the cumulative cost increases experienced by each excluded hospital since its applicable base period. For excluded hospitals that have maintained their cost increases at a level below the rate-of-increase limits since their base period, the major effect is on the level of incentive payments these excluded hospitals receive. Conversely, for excluded hospitals with cost increases above the cumulative update in their rate-of-increase limits, the major effect is the amount of excess costs that would not be paid.

We note that, under § 413.40(d)(3), an excluded hospital that continues to be paid under the TEFRA system and whose costs exceed 110 percent of its rate-of-increase limit receives its rate-of-increase limit plus the lesser of: (1) 50 percent of its reasonable costs in excess of 110 percent of the limit; or (2) 10 percent of its limit. In addition, under the various provisions set forth in § 413.40, hospitals can obtain payment adjustments for justifiable increases in operating costs that exceed the limit.

#### G. Quantitative Effects of the Policy Changes under the IPPS for Operating Costs

##### 1. Basis and Methodology of Estimates

In this final rule, we are announcing policy changes and payment rate updates for the IPPS for FY 2019 for operating costs of acute care hospitals. The FY 2019 updates to the capital payments to acute care hospitals are discussed in section I.I. of this Appendix.

Based on the overall percentage change in payments per case estimated using our payment simulation model, we estimate that total FY 2019 operating payments will increase by 2.4 percent, compared to FY 2018. In addition to the applicable percentage increase, this amount reflects the 0.5 percent permanent adjustment to the standardized amount required under section 414 of the MACRA. The impacts do not reflect changes in the number of hospital admissions or real case-mix intensity, which will also affect overall payment changes.

We have prepared separate impact analyses of the changes to each system. This section deals with the changes to the operating inpatient prospective payment system for acute care hospitals. Our payment simulation model relies on the most recent available claims data to enable us to estimate the impacts on payments per case of certain changes in this final rule. However, there are other changes for which we do not have data available that would allow us to estimate the payment impacts using this model. For those changes, we have attempted to predict the payment impacts based upon our experience and other more limited data.

The data used in developing the quantitative analyses of changes in payments per case presented in this section are taken from the FY 2017 MedPAR file and the most current Provider-Specific File (PSF) that is used for payment purposes. Although the analyses of the changes to the operating PPS do not incorporate cost data, data from the most recently available hospital cost reports were used to categorize hospitals. Our analysis has several qualifications. First, in this analysis, we do not make adjustments for future changes in such variables as admissions, lengths of stay, or underlying growth in

real case-mix. Second, due to the interdependent nature of the IPPS payment components, it is very difficult to precisely quantify the impact associated with each change. Third, we use various data sources to categorize hospitals in the tables. In some cases, particularly the number of beds, there is a fair degree of variation in the data from the different sources. We have attempted to construct these variables with the best available source overall. However, for individual hospitals, some miscategorizations are possible.

Using cases from the FY 2017 MedPAR file, we simulate payments under the operating IPPS given various combinations of payment parameters. As described previously, Indian Health Service hospitals and hospitals in Maryland were excluded from the simulations. The impact of payments under the capital IPPS, and the impact of payments for costs other than inpatient operating costs, are not analyzed in this section. Estimated payment impacts of the capital IPPS for FY 2019 are discussed in section I.I. of this Appendix.

We discuss the following changes:

- The effects of the application of the adjustment required under section 414 of the MACRA and the applicable percentage increase (including the market basket update, the multifactor productivity adjustment, and the applicable percentage reduction in accordance with the Affordable Care Act) to the standardized amount and hospital-specific rates.
- The effects of the changes to the relative weights and MS-DRG GROUPER.

- The effects of the changes in hospitals' wage index values reflecting updated wage data from hospitals' cost reporting periods beginning during FY 2015, compared to the FY 2014 wage data, to calculate the FY 2019 wage index.
- The effects of the geographic reclassifications by the MGCRB (as of publication of this final rule) that will be effective for FY 2019.
- The effects of the rural floor with the application of the national budget neutrality factor to the wage index, and the expiration of the imputed floor.
- The effects of the frontier State wage index adjustment under the statutory provision that requires hospitals located in States that qualify as frontier States to not have a wage index less than 1.0. This provision is not budget neutral.
- The effects of the implementation of section 1886(d)(13) of the Act, as added by section 505 of Pub. L. 108-173, which provides for an increase in a hospital's wage index if a threshold percentage of residents of the county where the hospital is located commute to work at hospitals in counties with higher wage indexes for FY 2019. This provision is not budget neutral.
- The total estimated change in payments based on the FY 2019 policies relative to payments based on FY 2018 policies that include the applicable percentage increase of 1.35 percent (or 2.9 percent market basket update with a reduction of 0.8 percentage point for the multifactor productivity adjustment, and a 0.75 percentage point reduction, as required under the Affordable Care Act).

To illustrate the impact of the FY 2019 changes, our analysis begins with a FY 2018 baseline simulation model using: the FY 2018 applicable percentage increase

of 1.35 percent, the 0.4588 percent adjustment to the Federal standardized amount, and the adjustment factor of (1/1.006) to both the national standardized amount and the hospital-specific rate; the FY 2018 MS-DRG GROUPER (Version 35); the FY 2018 CBSA designations for hospitals based on the OMB definitions from the 2010 Census; the FY 2018 wage index; and no MGCRB reclassifications. Outlier payments are set at 5.1 percent of total operating MS-DRG and outlier payments for modeling purposes.

Section 1886(b)(3)(B)(viii) of the Act, as added by section 5001(a) of Pub. L. 109-171, as amended by section 4102(b)(1)(A) of the ARRA (Pub. L. 111-5) and by section 3401(a)(2) of the Affordable Care Act (Pub. L. 111-148), provides that, for FY 2007 and each subsequent year through FY 2014, the update factor will include a reduction of 2.0 percentage points for any subsection (d) hospital that does not submit data on measures in a form and manner, and at a time specified by the Secretary. Beginning in FY 2015, the reduction is one-quarter of such applicable percentage increase determined without regard to section 1886(b)(3)(B)(ix), (xi), or (xii) of the Act, or one-quarter of the market basket update. Therefore, for FY 2019, hospitals that do not submit quality information under rules established by the Secretary and that are meaningful EHR users under section 1886(b)(3)(B)(ix) of the Act will receive an applicable percentage increase of 0.625 percent. At the time this impact was prepared, 49 hospitals are estimated to not receive the full market basket rate-of-increase for FY 2019 because they failed the quality data submission process or did not choose to participate, but are meaningful EHR users. For purposes of the simulations shown later in this

section, we modeled the payment changes for FY 2019 using a reduced update for these hospitals.

For FY 2019, in accordance with section 1886(b)(3)(B)(ix) of the Act, a hospital that has been identified as not a meaningful EHR user will be subject to a reduction of three-quarters of such applicable percentage increase determined without regard to section 1886(b)(3)(B)(ix), (xi), or (xii) of the Act. Therefore, for FY 2019, hospitals that are identified as not meaningful EHR users and do submit quality information under section 1886(b)(3)(B)(viii) of the Act will receive an applicable percentage increase of - 0.825 percent. At the time this impact analysis was prepared, 137 hospitals are estimated to not receive the full market basket rate-of-increase for FY 2019 because they are identified as not meaningful EHR users that do submit quality information under section 1886(b)(3)(B)(viii) of the Act. For purposes of the simulations shown in this section, we modeled the payment changes for FY 2019 using a reduced update for these hospitals.

Hospitals that are identified as not meaningful EHR users under section 1886(b)(3)(B)(ix) of the Act and also do not submit quality data under section 1886(b)(3)(B)(viii) of the Act will receive an applicable percentage increase of - 1.55 percent, which reflects a one-quarter reduction of the market basket update for failure to submit quality data and a three-quarter reduction of the market basket update for being identified as not a meaningful EHR user. At the time this impact was prepared, 40 hospitals are estimated to not receive the full market basket rate-of-increase for

FY 2019 because they are identified as not meaningful EHR users that do not submit quality data under section 1886(b)(3)(B)(viii) of the Act.

Each policy change, statutory or otherwise, is then added incrementally to this baseline, finally arriving at an FY 2019 model incorporating all of the changes. This simulation allows us to isolate the effects of each change.

Our comparison illustrates the percent change in payments per case from FY 2018 to FY 2019. Two factors not discussed separately have significant impacts here. The first factor is the update to the standardized amount. In accordance with section 1886(b)(3)(B)(i) of the Act, we are updating the standardized amounts for FY 2019 using an applicable percentage increase of 1.35 percent. This includes our forecasted IPPS operating hospital market basket increase of 2.9 percent with a 0.8 percentage point reduction for the multifactor productivity adjustment and a 0.75 percentage point reduction, as required, under the Affordable Care Act. Hospitals that fail to comply with the quality data submission requirements and are meaningful EHR users will receive an update of 0.625 percent. This update includes a reduction of one-quarter of the market basket update for failure to submit these data. Hospitals that do comply with the quality data submission requirements but are not meaningful EHR users will receive an update of -0.825 percent, which includes a reduction of three-quarters of the market basket update. Furthermore, hospitals that do not comply with the quality data submission requirements and also are not meaningful EHR users will receive an update of -1.55 percent. Under section 1886(b)(3)(B)(iv) of the Act, the update to the hospital-specific amounts for

SCHs and MDHs is also equal to the applicable percentage increase, or 1.35 percent, if the hospital submits quality data and is a meaningful EHR user.

A second significant factor that affects the changes in hospitals' payments per case from FY 2018 to FY 2019 is the change in hospitals' geographic reclassification status from one year to the next. That is, payments may be reduced for hospitals reclassified in FY 2018 that are no longer reclassified in FY 2019. Conversely, payments may increase for hospitals not reclassified in FY 2018 that are reclassified in FY 2019.

## 2. Analysis of Table I

Table I displays the results of our analysis of the changes for FY 2019. The table categorizes hospitals by various geographic and special payment consideration groups to illustrate the varying impacts on different types of hospitals. The top row of the table shows the overall impact on the 3,256 acute care hospitals included in the analysis.

The next four rows of Table I contain hospitals categorized according to their geographic location: all urban, which is further divided into large urban and other urban; and rural. There are 2,483 hospitals located in urban areas included in our analysis. Among these, there are 1,302 hospitals located in large urban areas (populations over 1 million), and 1,181 hospitals in other urban areas (populations of 1 million or fewer). In addition, there are 773 hospitals in rural areas. The next two groupings are by bed-size categories, shown separately for urban and rural hospitals. The last groupings by geographic location are by census divisions, also shown separately for urban and rural hospitals.

The second part of Table I shows hospital groups based on hospitals' FY 2019 payment classifications, including any reclassifications under section 1886(d)(10) of the Act. For example, the rows labeled urban, large urban, other urban, and rural show that the numbers of hospitals paid based on these categorizations after consideration of geographic reclassifications (including reclassifications under sections 1886(d)(8)(B) and 1886(d)(8)(E) of the Act that have implications for capital payments) are 2,264, 1,317, 947, and 992, respectively.

The next three groupings examine the impacts of the changes on hospitals grouped by whether or not they have GME residency programs (teaching hospitals that receive an IME adjustment) or receive Medicare DSH payments, or some combination of these two adjustments. There are 2,157 nonteaching hospitals in our analysis, 849 teaching hospitals with fewer than 100 residents, and 250 teaching hospitals with 100 or more residents.

In the DSH categories, hospitals are grouped according to their DSH payment status, and whether they are considered urban or rural for DSH purposes. The next category groups together hospitals considered urban or rural, in terms of whether they receive the IME adjustment, the DSH adjustment, both, or neither.

The next three rows examine the impacts of the changes on rural hospitals by special payment groups (SCHs, MDHs and RRCs). There were 327 RRCs, 312 SCHs, 140 MDHs, 134 hospitals that are both SCHs and RRCs, and 16 hospitals that are both MDHs and RRCs.

The next series of groupings are based on the type of ownership and the hospital's Medicare utilization expressed as a percent of total inpatient days. These data were taken from the FY 2016 or FY 2015 Medicare cost reports.

The next two groupings concern the geographic reclassification status of hospitals. The first grouping displays all urban hospitals that were reclassified by the MGCRB for FY 2019. The second grouping shows the MGCRB rural reclassifications.

**TABLE I.—IMPACT ANALYSIS OF CHANGES TO THE IPPS FOR OPERATING COSTS FOR FY 2019**

	Number of Hospitals <sup>1</sup>	Hospital Rate Update and Adjustment under MACRA (1) <sup>2</sup>	FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2) <sup>3</sup>	FY 2019 Wage Data with Application of Wage Budget Neutrality (3) <sup>4</sup>	FY 2019 MGCRB Reclassifications (4) <sup>5</sup>	Rural Floor with Application of National Rural Floor Budget Neutrality (5) <sup>6</sup>	Application of the Frontier Wage Index and Outmigration Adjustment (6) <sup>7</sup>	All FY 2019 Changes (7) <sup>8</sup>
<b>All Hospitals</b>	3,256	1.8	0	0	0	0	0.1	2.4
<b>By Geographic Location:</b>								
Urban hospitals	2,483	1.8	0	0	-0.1	0	0.1	2.5
Large urban areas	1,302	1.8	0.1	0	-0.7	0	0	2.4
Other urban areas	1,181	1.8	0	0	0.5	0.1	0.2	2.5
Rural hospitals	773	1.5	-0.3	-0.1	1.2	-0.2	0.1	1.2
<b>Bed Size (Urban):</b>								
0-99 beds	644	1.7	-0.5	0.1	-0.7	0.1	0.2	1.7
100-199 beds	763	1.8	0	0	-0.1	0.1	0.2	2.2
200-299 beds	433	1.8	0	0	0.1	0	0.1	2.3
300-499 beds	424	1.8	0.1	0	-0.1	0	0.1	2.5
500 or more beds	219	1.8	0.1	0	-0.2	0	0	2.9
<b>Bed Size (Rural):</b>								
0-49 beds	306	1.4	-0.5	0	0.3	-0.2	0.2	0.9
50-99 beds	274	1.3	-0.4	0	0.7	-0.1	0.2	1.1
100-149 beds	108	1.6	-0.5	-0.1	0.9	-0.2	0	1.2
150-199 beds	45	1.7	-0.1	-0.2	2	-0.2	0.3	1.4

	Number of Hospitals <sup>1</sup>	Hospital Rate Update and Adjustment under MACRA (1) <sup>2</sup>	FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2) <sup>3</sup>	FY 2019 Wage Data with Application of Wage Budget Neutrality (3) <sup>4</sup>	FY 2019 MGCRB Reclassifications (4) <sup>5</sup>	Rural Floor with Application of National Rural Floor Budget Neutrality (5) <sup>6</sup>	Application of the Frontier Wage Index and Outmigration Adjustment (6) <sup>7</sup>	All FY 2019 Changes (7) <sup>8</sup>
200 or more beds	40	1.7	0.1	-0.2	2.4	-0.2	0	1.6
<b>Urban by Region:</b>								
New England	113	1.8	0.1	-0.5	2.6	2.5	0.1	4.7
Middle Atlantic	310	1.8	0.2	0	0.3	-0.4	0.1	2.3
South Atlantic	401	1.8	0	-0.1	-0.5	-0.3	0	2.1
East North Central	386	1.8	0.1	-0.2	-0.4	-0.4	0.1	2.1
East South Central	147	1.8	0	0	-0.4	-0.3	0	2.1
West North Central	158	1.8	-0.1	0	-0.8	-0.3	0.6	2.1
West South Central	379	1.8	0	0.2	-0.7	-0.3	0	2.3
Mountain	164	1.7	-0.1	-0.7	-0.2	1.1	0.3	2.1
Pacific	374	1.8	-0.1	0.8	0.1	0.2	0.1	3.2
Puerto Rico	51	1.8	0	-1.2	-1.2	0.1	0.1	0.8
<b>Rural by Region:</b>								
New England	20	1.5	0.1	-0.5	1.5	-0.3	0	0.9
Middle Atlantic	53	1.5	-0.2	-0.1	0.7	-0.2	0.1	1.4
South Atlantic	122	1.6	-0.2	-0.2	1.7	-0.2	0.1	1.2
East North Central	114	1.5	-0.3	0.1	0.9	-0.1	0	1.1
East South Central	150	1.7	-0.1	-0.2	2.5	-0.3	0.1	1.8
West North Central	94	1.3	-0.5	0	0.1	0	0.2	0.9

	Number of Hospitals <sup>1</sup>	Hospital Rate Update and Adjustment under MACRA (1) <sup>2</sup>	FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2) <sup>3</sup>	FY 2019 Wage Data with Application of Wage Budget Neutrality (3) <sup>4</sup>	FY 2019 MGCRB Reclassifications (4) <sup>5</sup>	Rural Floor with Application of National Rural Floor Budget Neutrality (5) <sup>6</sup>	Application of the Frontier Wage Index and Outmigration Adjustment (6) <sup>7</sup>	All FY 2019 Changes (7) <sup>8</sup>
West South Central	145	1.5	-0.3	0.2	1.3	-0.3	0.2	1.5
Mountain	52	1.3	-1.1	-0.4	0	-0.1	0.8	0.8
Pacific	23	1.4	-0.4	-0.2	0.8	-0.1	0	1
<b>By Payment Classification:</b>								
Urban hospitals	2,264	1.8	0	0	-0.6	0	0.1	2.3
Large urban areas	1,317	1.8	0.1	0	-0.7	0	0	2.4
Other urban areas	947	1.8	0	0	-0.3	0.2	0.2	2.1
Rural areas	992	1.7	-0.1	0	1.9	-0.1	0.1	2.7
<b>Teaching Status:</b>								
Nonteaching	2,157	1.7	-0.1	0	0.1	0.1	0.1	2.1
Fewer than 100 residents	849	1.8	0	0	-0.2	-0.1	0.2	2.2
100 or more residents	250	1.8	0.2	0	0.1	-0.1	0	3.1
<b>Urban DSH:</b>								
Non-DSH	520	1.8	-0.3	-0.2	-0.2	-0.1	0.2	2.1
100 or more beds	1,462	1.8	0.1	0	-0.6	0.1	0.1	2.3
Less than 100 beds	367	1.7	-0.2	0.3	-0.6	0.1	0.1	1.9
<b>Rural DSH:</b>								
SCH	256	1.2	-0.6	-0.1	0	-0.1	0	0.7
RRC	382	1.7	0	0.1	2.3	-0.2	0.1	3.1

	Number of Hospitals <sup>1</sup>	Hospital Rate Update and Adjustment under MACRA (1) <sup>2</sup>	FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2) <sup>3</sup>	FY 2019 Wage Data with Application of Wage Budget Neutrality (3) <sup>4</sup>	FY 2019 MGCRB Reclassifications (4) <sup>5</sup>	Rural Floor with Application of National Rural Floor Budget Neutrality (5) <sup>6</sup>	Application of the Frontier Wage Index and Outmigration Adjustment (6) <sup>7</sup>	All FY 2019 Changes (7) <sup>8</sup>
100 or more beds	33	1.8	0	-0.6	1	0.2	0.1	2.9
Less than 100 beds	236	1.6	-0.3	0	0.8	-0.2	0.3	1.5
<b>Urban teaching and DSH:</b>								
Both teaching and DSH	805	1.8	0.1	0	-0.6	-0.1	0.1	2.4
Teaching and no DSH	89	1.9	-0.1	-0.1	-0.5	-0.1	0	2.3
No teaching and DSH	1,024	1.8	0	0.1	-0.4	0.3	0.1	2.2
No teaching and no DSH	346	1.8	-0.3	-0.2	-0.6	-0.1	0.2	1.8
<b>Special Hospital Types:</b>								
RRC	327	1.8	0	0.2	2.5	-0.2	0.2	3.4
SCH	312	1.1	-0.5	0.1	-0.1	-0.1	0	0.8
MDH	140	1.5	-0.5	-0.1	0.8	0	0	1.2
SCH and RRC	134	1.4	-0.2	-0.2	0.3	0	0.1	1.2
MDH and RRC	16	1.5	-0.4	0	0.8	-0.1	0	1.1
<b>Type of Ownership:</b>								
Voluntary	1,899	1.8	0	0	0	0	0.1	2.4
Proprietary	856	1.8	0	-0.1	-0.1	0	0.1	2.1
Government	501	1.7	0.1	0.2	-0.1	-0.1	0	2.5

	<b>Number of Hospitals<sup>1</sup></b>	<b>Hospital Rate Update and Adjustment under MACRA (1)<sup>2</sup></b>	<b>FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2)<sup>3</sup></b>	<b>FY 2019 Wage Data with Application of Wage Budget Neutrality (3)<sup>4</sup></b>	<b>FY 2019 MGCRB Reclassifications (4)<sup>5</sup></b>	<b>Rural Floor with Application of National Rural Floor Budget Neutrality (5)<sup>6</sup></b>	<b>Application of the Frontier Wage Index and Outmigration Adjustment (6)<sup>7</sup></b>	<b>All FY 2019 Changes (7)<sup>8</sup></b>
<b>Medicare Utilization as a Percent of Inpatient Days:</b>								
0-25	602	1.8	0.1	-0.1	-0.5	0	0	2.3
25-50	2,139	1.8	0	0	0	0	0.1	2.5
50-65	421	1.7	-0.2	-0.1	0.6	0.2	0.1	1.7
Over 65	73	1.1	0.5	-0.1	-0.4	-0.3	0.1	2.5
<b>FY 2019 Reclassifications by the Medicare Geographic Classification Review Board:</b>								
All Reclassified Hospitals	856	1.8	0	0.1	2.4	-0.2	0	2.8
Non-Reclassified Hospitals	2,400	1.8	0	0	-1	0.1	0.1	2.2
Urban Hospitals Reclassified	585	1.8	0	0.1	2.4	-0.2	0	3
Urban Non-Reclassified Hospitals	1,838	1.8	0	0	-1.1	0.1	0.1	2.3
Rural Hospitals Reclassified Full Year	271	1.5	-0.2	-0.1	2.1	-0.2	0.1	1.5

	<b>Number of Hospitals<sup>1</sup></b>	<b>Hospital Rate Update and Adjustment under MACRA (1)<sup>2</sup></b>	<b>FY 2019 Weights and DRG Changes with Application of Recalibration Budget Neutrality (2)<sup>3</sup></b>	<b>FY 2019 Wage Data with Application of Wage Budget Neutrality (3)<sup>4</sup></b>	<b>FY 2019 MGCRB Reclassifications (4)<sup>5</sup></b>	<b>Rural Floor with Application of National Rural Floor Budget Neutrality (5)<sup>6</sup></b>	<b>Application of the Frontier Wage Index and Outmigration Adjustment (6)<sup>7</sup></b>	<b>All FY 2019 Changes (7)<sup>8</sup></b>
Rural Non-Reclassified Hospitals Full Year	455	1.4	-0.5	-0.1	-0.4	-0.1	0.3	0.8
All Section 401 Reclassified Hospitals	266	1.7	0	0.1	2.3	-0.1	0.1	3.4
Other Reclassified Hospitals (Section 1886(d)(8)(B))	47	1.7	-0.2	-0.1	2.8	-0.3	0	1.5

<sup>1</sup> Because data necessary to classify some hospitals by category were missing, the total number of hospitals in each category may not equal the national total. Discharge data are from FY 2017, and hospital cost report data are from reporting periods beginning in FY 2016 and FY 2015.

<sup>2</sup> This column displays the payment impact of the hospital rate update and other adjustments, including the 1.35 percent adjustment to the national standardized amount and the hospital-specific rate (the estimated 2.9 percent market basket update reduced by 0.8 percentage point for the multifactor productivity adjustment and the 0.75 percentage point reduction under the Affordable Care Act), and the 0.5 percent adjustment to the national standardized amount required under section 414 of the MACRA.

<sup>3</sup> This column displays the payment impact of the changes to the Version 36 GROUPER, the changes to the relative weights and the recalibration of the MS-DRG weights based on FY 2017 MedPAR data in accordance with section 1886(d)(4)(C)(iii) of the Act. This column displays the application of the recalibration budget neutrality factor of 0.997192 in accordance with section 1886(d)(4)(C)(iii) of the Act.

<sup>4</sup> This column displays the payment impact of the update to wage index data using FY 2015 cost report data and the OMB labor market area delineations based on 2010 Decennial Census data. This column displays the payment impact of the application of the wage budget neutrality factor, which is calculated separately from the recalibration budget neutrality factor, and is calculated in accordance with section 1886(d)(3)(E)(i) of the Act. The wage budget neutrality factor is 1.000748.

<sup>5</sup> Shown here are the effects of geographic reclassifications by the Medicare Geographic Classification Review Board (MGCRB). The effects demonstrate the FY 2019 payment impact of going from no reclassifications to the reclassifications scheduled to be in effect for FY 2019. Reclassification for prior years has no bearing on the payment impacts shown here. This column reflects the geographic budget neutrality factor of 0.985932.

<sup>6</sup> This column displays the effects of the rural floor and expiration of the imputed floor. The Affordable Care Act requires the rural floor budget neutrality adjustment to be 100 percent national level adjustment. The rural floor budget neutrality factor applied to the wage index is 0.993142.

<sup>7</sup> This column shows the combined impact of the policy required under section 10324 of the Affordable Care Act that hospitals located in frontier States have a wage index no less than 1.0 and of section 1886(d)(13) of the Act, as added by section 505 of Pub. L. 108-173, which provides for an increase in a hospital's wage index if a threshold percentage of residents of the county where the hospital is located commute to work at hospitals in counties with higher wage indexes. These are not budget neutral policies.

<sup>8</sup>This column shows the estimated change in payments from FY 2018 to FY 2019.

a. Effects of the Hospital Update and Other Adjustments (Column 1)

As discussed in section IV.B. of the preamble of this final rule, this column includes the hospital update, including the 2.9 percent market basket update, the reduction of 0.8 percentage point for the multifactor productivity adjustment, and the 0.75 percentage point reduction, in accordance with the Affordable Care Act. In addition, as discussed in section II.D. of the preamble of this final rule, this column includes the FY 2019 +0.5 percent adjustment required under section 414 of the MACRA. As a result, we are making a 1.85 percent update to the national standardized amount. This column also includes the update to the hospital-specific rates which includes the 2.9 percent market basket update, the reduction of 0.8 percentage point for the multifactor productivity adjustment, and the 0.75 percentage point reduction in accordance with the Affordable Care Act. As a result, we are making a 1.35 percent update to the hospital-specific rates.

Overall, hospitals will experience a 1.8 percent increase in payments primarily due to the combined effects of the hospital update to the national standardized amount and the hospital update to the hospital-specific rate. Hospitals that are paid under the hospital-specific rate will experience a 1.35 percent increase in payments; therefore, hospital categories containing hospitals paid under the hospital specific rate will experience a lower than average increase in payments.

b. Effects of the Changes to the MS-DRG Reclassifications and Relative Cost-Based Weights with Recalibration Budget Neutrality (Column 2)

Column 2 shows the effects of the changes to the MS-DRGs and relative weights with the application of the recalibration budget neutrality factor to the standardized amounts. Section 1886(d)(4)(C)(i) of the Act requires us annually to make appropriate classification changes in order to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources. Consistent with section 1886(d)(4)(C)(iii) of the Act, we calculated a recalibration budget neutrality factor to account for the changes in MS-DRGs and relative weights to ensure that the overall payment impact is budget neutral.

As discussed in section II.E. of the preamble of this final rule, the FY 2019 MS-DRG relative weights will be 100 percent cost-based and 100 percent MS-DRGs. For FY 2019, the MS-DRGs are calculated using the FY 2017 MedPAR data grouped to the Version 36 (FY 2019) MS-DRGs. The methodology to calculate the relative weights and the reclassification changes to the GROUPER are described in more detail in section II.G. of the preamble of this final rule.

The “All Hospitals” line in Column 2 indicates that changes due to the MS-DRGs and relative weights will result in a 0.0 percent change in payments with the application of the recalibration budget neutrality factor of 0.997192 to the standardized amount. Hospital categories that generally treat more medical cases than surgical cases will experience a decrease in their payments under the relative weights. For example, rural hospitals will experience a 0.3 percent decrease in payments in part because rural

hospitals tend to treat fewer surgical cases than medical cases. Conversely, teaching hospitals with more than 100 residents will experience an increase in payments of 0.2 percent as those hospitals treat more surgical cases than medical cases.

c. Effects of the Wage Index Changes (Column 3)

Column 3 shows the impact of updated wage data using FY 2015 cost report data, with the application of the wage budget neutrality factor. The wage index is calculated and assigned to hospitals on the basis of the labor market area in which the hospital is located. Under section 1886(d)(3)(E) of the Act, beginning with FY 2005, we delineate hospital labor market areas based on the Core Based Statistical Areas (CBSAs) established by OMB. The current statistical standards used in FY 2019 are based on OMB standards published on February 28, 2013 (75 FR 37246 and 37252), and 2010 Decennial Census data (OMB Bulletin No. 13-01), as updated in OMB Bulletin Nos. 15-01 and 17-01. (We refer readers to the FY 2015 IPPS/LTCH PPS final rule (79 FR 49951 through 49963) for a full discussion on our adoption of the OMB labor market area delineations, based on the 2010 Decennial Census data, effective beginning with the FY 2015 IPPS wage index, to section III.A.2. of the preamble of the FY 2017 IPPS/LTCH PPS final rule (81 FR 56913) for a discussion of our adoption of the CBSA updates in OMB Bulletin No. 15-01, which were effective beginning with the FY 2017 wage index, and to section III.A.2. of this final rule for a discussion of our adoption of the CBSA update in OMB Bulletin No. 17-01 for the FY 2019 wage index.)

Section 1886(d)(3)(E) of the Act requires that, beginning October 1, 1993, we annually update the wage data used to calculate the wage index. In accordance with this

requirement, the wage index for acute care hospitals for FY 2019 is based on data submitted for hospital cost reporting periods, beginning on or after October 1, 2014 and before October 1, 2015. The estimated impact of the updated wage data using the FY 2015 cost report data and the OMB labor market area delineations on hospital payments is isolated in Column 3 by holding the other payment parameters constant in this simulation. That is, Column 3 shows the percentage change in payments when going from a model using the FY 2018 wage index, based on FY 2014 wage data, the labor-related share of 68.3 percent, under the OMB delineations and having a 100-percent occupational mix adjustment applied, to a model using the FY 2019 pre-reclassification wage index based on FY 2015 wage data with the labor-related share of 68.3 percent, under the OMB delineations, also having a 100-percent occupational mix adjustment applied, while holding other payment parameters, such as use of the Version 36 MS-DRG GROUPER constant. The FY 2019 occupational mix adjustment is based on the CY 2016 occupational mix survey.

In addition, the column shows the impact of the application of the wage budget neutrality to the national standardized amount. In FY 2010, we began calculating separate wage budget neutrality and recalibration budget neutrality factors, in accordance with section 1886(d)(3)(E) of the Act, which specifies that budget neutrality to account for wage index changes or updates made under that subparagraph must be made without regard to the 62 percent labor-related share guaranteed under section 1886(d)(3)(E)(ii) of the Act. Therefore, for FY 2019, we calculated the wage budget neutrality factor to ensure that payments under updated wage data and the labor-related share of 68.3 percent

are budget neutral, without regard to the lower labor-related share of 62 percent applied to hospitals with a wage index less than or equal to 1.0. In other words, the wage budget neutrality is calculated under the assumption that all hospitals receive the higher labor-related share of the standardized amount. The FY 2019 wage budget neutrality factor is 1.000748, and the overall payment change is 0 percent.

Column 3 shows the impacts of updating the wage data using FY 2015 cost reports. Overall, the new wage data and the labor-related share, combined with the wage budget neutrality adjustment, will lead to no change for all hospitals, as shown in Column 3.

In looking at the wage data itself, the national average hourly wage will increase 1.02 percent compared to FY 2018. Therefore, the only manner in which to maintain or exceed the previous year's wage index was to match or exceed the 1.02 percent increase in the national average hourly wage. Of the 3,252 hospitals with wage data for both FYs 2018 and 2019, 1,475 or 45.4 percent will experience an average hourly wage increase of 1.02 percent or more.

The following chart compares the shifts in wage index values for hospitals due to changes in the average hourly wage data for FY 2019 relative to FY 2018. Among urban hospitals, 10 will experience a decrease of 10 percent or more, and 3 urban hospitals will experience an increase of 10 percent or more. One hundred five urban hospitals will experience an increase or decrease of at least 5 percent or more but less than 10 percent. Among rural hospitals, 3 will experience an increase of 10 percent or more, and 2 will experience a decrease of 10 percent or more. Nine rural hospitals will experience an

increase or decrease of at least 5 percent or more but less than 10 percent. However, 726 rural hospitals will experience increases or decreases of less than 5 percent, while 2,360 urban hospitals will experience increases or decreases of less than 5 percent. No urban hospitals and 34 rural hospitals will experience no change to their wage index. These figures reflect changes in the “pre-reclassified, occupational mix-adjusted wage index,” that is, the wage index before the application of geographic reclassification, the rural floor, the out-migration adjustment, and other wage index exceptions and adjustments. (We refer readers to sections III.G. through III.L. of the preamble of this final rule for a complete discussion of the exceptions and adjustments to the wage index.) We note that the “post-reclassified wage index” or “payment wage index,” which is the wage index that includes all such exceptions and adjustments (as reflected in Tables 2 and 3 associated with this final rule, which are available via the Internet on the CMS website) is used to adjust the labor-related share of a hospital’s standardized amount, either 68.3 percent or 62 percent, depending upon whether a hospital’s wage index is greater than 1.0 or less than or equal to 1.0. Therefore, the pre-reclassified wage index figures in the following chart may illustrate a somewhat larger or smaller change than will occur in a hospital’s payment wage index and total payment.

The following chart shows the projected impact of changes in the area wage index values for urban and rural hospitals.

FY 2019 Percentage Change in Area Wage Index Values	Number of Hospitals	
	Urban	Rural
Increase 10 percent or more	3	3
Increase greater than or equal to 5 percent and less than 10 percent	62	3

FY 2019 Percentage Change in Area Wage Index Values	Number of Hospitals	
	Urban	Rural
Increase or decrease less than 5 percent	2,360	726
Decrease greater than or equal to 5 percent and less than 10 percent	43	6
Decrease 10 percent or more	10	2
Unchanged	0	34

d. Effects of MGCRB Reclassifications (Column 4)

Our impact analysis to this point has assumed acute care hospitals are paid on the basis of their actual geographic location (with the exception of ongoing policies that provide that certain hospitals receive payments on bases other than where they are geographically located). The changes in Column 4 reflect the per case payment impact of moving from this baseline to a simulation incorporating the MGCRB decisions for FY 2019.

By spring of each year, the MGCRB makes reclassification determinations that will be effective for the next fiscal year, which begins on October 1. The MGCRB may approve a hospital’s reclassification request for the purpose of using another area’s wage index value. Hospitals may appeal denials of MGCRB decisions to the CMS Administrator. Further, hospitals have 45 days from the date the IPPS proposed rule is issued in the **Federal Register** to decide whether to withdraw or terminate an approved geographic reclassification for the following year (we refer readers to the discussion of our clarification of this policy in section III.I.2. of the preamble to this final rule.

The overall effect of geographic reclassification is required by section 1886(d)(8)(D) of the Act to be budget neutral. Therefore, for purposes of this

impact analysis, we are applying an adjustment of 0.985932 to ensure that the effects of the reclassifications under sections 1886(d)(8)(B) and (C) and 1886(d)(10) of the Act are budget neutral (section II.A. of the Addendum to this final rule). Geographic reclassification generally benefits hospitals in rural areas. We estimate that the geographic reclassification will increase payments to rural hospitals by an average of 1.2 percent. By region, with the exception of rural providers in the Mountain region which will experience no change, all the rural hospital categories will experience increases in payments due to MGCRB reclassifications.

Table 2 listed in section VI. of the Addendum to this final rule and available via the Internet on the CMS Web site reflects the reclassifications for FY 2019.

e. Effects of the Rural Floor, Including Application of National Budget Neutrality  
(Column 5)

As discussed in section III.B. of the preamble of the FY 2009 IPPS final rule, the FY 2010 IPPS/RV 2010 LTCH PPS final rule, the FYs 2011 through 2018 IPPS/LTCH PPS final rules, and this FY 2019 IPPS/LTCH PPS final rule, section 4410 of Pub. L. 105-33 established the rural floor by requiring that the wage index for a hospital in any urban area cannot be less than the wage index received by rural hospitals in the same State. We will apply a uniform budget neutrality adjustment to the wage index. As discussed in section III.G. of the preamble of this final rule, we are not extending the imputed floor policy. Therefore, Column 5 shows the effects of the rural floor only.

The Affordable Care Act requires that we apply one rural floor budget neutrality factor to the wage index nationally. We have calculated a FY 2019 rural floor budget neutrality factor to be applied to the wage index of 0.993142, which will reduce wage indexes by 0.69 percent.

Column 5 shows the projected impact of the rural floor with the national rural floor budget neutrality factor applied to the wage index based on the OMB labor market area delineations. The column compares the post-reclassification FY 2019 wage index of providers before the rural floor adjustment and the post-reclassification FY 2019 wage index of providers with the rural floor adjustment based on the OMB labor market area delineations. Only urban hospitals can benefit from the rural floors. Because the provision is budget neutral, all other hospitals (that is, all rural hospitals and those urban hospitals to which the adjustment is not made) will experience a decrease in payments due to the budget neutrality adjustment that is applied nationally to their wage index.

We estimate that 263 hospitals will receive the rural floor in FY 2019. All IPPS hospitals in our model will have their wage index reduced by the rural floor budget neutrality adjustment of 0.993142. We project that, in aggregate, rural hospitals will experience a 0.2 percent decrease in payments as a result of the application of the rural floor budget neutrality because the rural hospitals do not benefit from the rural floor, but have their wage indexes downwardly adjusted to ensure that the application of the rural floor is budget neutral overall. We project hospitals located in urban areas will experience no change in payments because increases in payments by hospitals benefitting from the rural floor offset decreases in payments by nonrural floor urban hospitals whose

wage index is downwardly adjusted by the rural floor budget neutrality factor. Urban hospitals in the New England region will experience a 2.5 percent increase in payments primarily due to the application of the rural floor in Massachusetts. Twenty nine urban providers in Massachusetts are expected to receive the rural floor wage index value, including the rural floor budget neutrality adjustment, increasing payments overall to hospitals in Massachusetts by an estimated \$121 million. We estimate that Massachusetts hospitals will receive approximately a 3.3 percent increase in IPPS payments due to the application of the rural floor in FY 2019. We note that the significant increase in overall payments to hospitals in Massachusetts compared to past years is due primarily to the increase in the Massachusetts rural floor as a result of the recent reclassification of Brigham and Women's Hospital in the city of Boston as a rural hospital under § 412.103. We also note that this table does not reflect all of the additional Medicare payments resulting from the reclassification of Brigham and Women's Hospital in Boston as a rural hospital under § 412.103. Some of this payment impact is reflected in column 4 (Reclassifications) in Table I– Impact Analysis of Changes to the IPPS for Operating Costs for FY 2019.

Urban Puerto Rico hospitals are expected to experience a 0.1 percent increase in payments as a result of the application of the rural floor.

In response to a public comment addressed in the FY 2012 IPPS/LTCH PPS final rule (76 FR 51593), we are providing the payment impact of the rural floor with budget neutrality at the State level. Column 1 of the following table displays the number of IPPS hospitals located in each State. Column 2 displays the number of hospitals in each State

that will receive the rural floor wage index for FY 2019. Column 3 displays the percentage of total payments each State will receive or contribute to fund the rural floor with national budget neutrality. The column compares the post-reclassification FY 2019 wage index of providers before the rural floor adjustment and the post-reclassification FY 2019 wage index of providers with the rural floor adjustment. Column 4 displays the estimated payment amount that each State will gain or lose due to the application of the rural floor with national budget neutrality.

<b>FY 2019 IPPS Estimated Payments Due to Rural Floor with National Budget Neutrality</b>				
<b>State</b>	<b>Number of Hospitals (1)</b>	<b>Number of Hospitals That Will Receive the Rural Floor (2)</b>	<b>Percent Change in Payments due to Application of Rural Floor with Budget Neutrality (3)</b>	<b>Difference (in \$ Millions) (4)</b>
Alabama	84	3	-0.3	\$-5
Alaska	6	3	0.1	\$0
Arizona	56	45	3.0	\$58
Arkansas	45	0	-0.3	\$-4
California	297	60	0.3	\$38
Colorado	46	9	0.6	\$7
Connecticut	30	10	2.0	\$32
Delaware	6	0	-0.4	\$-2
Washington, D.C.	7	0	-0.4	\$-2
Florida	168	7	-0.3	\$-23
Georgia	101	0	-0.3	\$-9
Hawaii	12	0	-0.3	\$-1
Idaho	14	0	-0.3	\$-1
Illinois	125	2	-0.4	\$-16
Indiana	85	0	-0.3	\$-8
Iowa	34	0	-0.3	\$-3
Kansas	51	0	-0.3	\$-3
Kentucky	64	0	-0.3	\$-6
Louisiana	90	0	-0.3	\$-5
Maine	17	0	-0.3	\$-2
Massachusetts	56	29	3.3	\$121
Michigan	94	0	-0.4	\$-15
Minnesota	49	0	-0.3	\$-6
Mississippi	59	0	-0.3	\$-4

<b>FY 2019 IPPS Estimated Payments Due to Rural Floor with National Budget Neutrality</b>				
<b>State</b>	<b>Number of Hospitals (1)</b>	<b>Number of Hospitals That Will Receive the Rural Floor (2)</b>	<b>Percent Change in Payments due to Application of Rural Floor with Budget Neutrality (3)</b>	<b>Difference (in \$ Millions) (4)</b>
Missouri	72	0	-0.3	\$-7
Montana	13	1	-0.2	\$-1
Nebraska	23	0	-0.3	\$-2
Nevada	22	3	0.3	\$3
New Hampshire	13	8	2.3	\$14
New Jersey	64	0	-0.5	\$-18
New Mexico	24	2	-0.2	\$-1
New York	149	16	-0.3	\$-24
North Carolina	84	0	-0.3	\$-10
North Dakota	6	3	0.4	\$1
Ohio	130	7	-0.3	\$-12
Oklahoma	79	2	-0.3	\$-5
Oregon	34	1	-0.3	\$-3
Pennsylvania	150	3	-0.4	\$-19
Puerto Rico	51	11	0.1	\$0
Rhode Island	11	0	-0.4	\$-2
South Carolina	54	6	-0.1	\$-2
South Dakota	17	0	-0.2	\$-1
Tennessee	90	6	-0.3	\$-8
Texas	310	13	-0.3	\$-20
Utah	31	0	-0.3	\$-2
Vermont	6	0	-0.2	\$0
Virginia	74	1	-0.3	\$-7
Washington	48	3	-0.4	\$-8
West Virginia	29	2	-0.2	\$-2
Wisconsin	66	5	-0.3	\$-5
Wyoming	10	2	0	\$0

f. Effects of the Application of the Frontier State Wage Index and Out-Migration

Adjustment (Column 6)

This column shows the combined effects of the application of section 10324(a) of the Affordable Care Act, which requires that we establish a minimum post-reclassified wage index of 1.00 for all hospitals located in “frontier States,” and the effects of

section 1886(d)(13) of the Act, as added by section 505 of Pub. L. 108-173, which provides for an increase in the wage index for hospitals located in certain counties that have a relatively high percentage of hospital employees who reside in the county, but work in a different area with a higher wage index. These two wage index provisions are not budget neutral and will increase payments overall by 0.1 percent compared to the provisions not being in effect.

The term “frontier States” is defined in the statute as States in which at least 50 percent of counties have a population density less than 6 persons per square mile. Based on these criteria, 5 States (Montana, Nevada, North Dakota, South Dakota, and Wyoming) are considered frontier States and 49 hospitals located in those States will receive a frontier wage index of 1.0000. Overall, this provision is not budget neutral and is estimated to increase IPPS operating payments by approximately \$62 million. Rural and urban hospitals located in the West North Central region will experience an increase in payments by 0.2 and 0.6 percent, respectively, because many of the hospitals located in this region are frontier State hospitals.

In addition, section 1886(d)(13) of the Act, as added by section 505 of Pub. L. 108-173, provides for an increase in the wage index for hospitals located in certain counties that have a relatively high percentage of hospital employees who reside in the county, but work in a different area with a higher wage index. Hospitals located in counties that qualify for the payment adjustment will receive an increase in the wage index that is equal to a weighted average of the difference between the wage index of the resident county, post-reclassification and the higher wage index work area(s), weighted

by the overall percentage of workers who are employed in an area with a higher wage index. There are an estimated 220 providers that will receive the out-migration wage adjustment in FY 2019. Rural hospitals generally will qualify for the adjustment, resulting in a 0.1 percent increase in payments. This provision appears to benefit section 401 hospitals and RRCs in that they will each experience a 0.1 and 0.2 percent increase in payments, respectively. (We note that there has been an increase in the number of RRCs as a result of the decision by the Court of Appeals for the Third Circuit in *Geisinger Community Medical Center vs. Secretary, United States Department of Health and Human Services*, 794 F.3d 383 (3d Cir. 2015) and subsequent regulatory changes (81 FR 23428).) This out-migration wage adjustment also is not budget neutral, and we estimate the impact of these providers receiving the out-migration increase will be approximately \$42 million.

g. Effects of All FY 2019 Changes (Column 7)

Column 7 shows our estimate of the changes in payments per discharge from FY 2018 and FY 2019, resulting from all changes reflected in this final rule for FY 2019. It includes combined effects of the year-to-year change of the previous columns in the table.

The average increase in payments under the IPPS for all hospitals is approximately 2.4 percent for FY 2019 relative to FY 2018 and for this row is primarily driven by the changes reflected in Column 1. Column 7 includes the annual hospital update of 1.35 percent to the national standardized amount. This annual hospital update includes the 2.9 percent market basket update, the 0.8 percentage point reduction for the

multifactor productivity adjustment, and the 0.75 percentage point reduction under section 3401 of the Affordable Care Act. As discussed in section II.D. of the preamble of this final rule, this column also includes the +0.5 percent adjustment required under section 414 of the MACRA. Hospitals paid under the hospital-specific rate will receive a 1.35 percent hospital update. As described in Column 1, the annual hospital update with the +0.5 percent adjustment for hospitals paid under the national standardized amount, combined with the annual hospital update for hospitals paid under the hospital-specific rates, will result in a 2.4 percent increase in payments in FY 2019 relative to FY 2018. There are also interactive effects among the various factors comprising the payment system that we are not able to isolate, which contribute to our estimate of the changes in payments per discharge from FY 2018 and FY 2019 in Column 7.

Overall payments to hospitals paid under the IPPS due to the applicable percentage increase and changes to policies related to MS-DRGs, geographic adjustments, and outliers are estimated to increase by 2.4 percent for FY 2019. Hospitals in urban areas will experience a 2.5 percent increase in payments per discharge in FY 2019 compared to FY 2018. Hospital payments per discharge in rural areas are estimated to increase by 1.2 percent in FY 2019.

### 3. Impact Analysis of Table II

Table II presents the projected impact of the changes for FY 2019 for urban and rural hospitals and for the different categories of hospitals shown in Table I. It compares the estimated average payments per discharge for FY 2018 with the estimated average payments per discharge for FY 2019, as calculated under our models. Therefore, this

table presents, in terms of the average dollar amounts paid per discharge, the combined effects of the changes presented in Table I. The estimated percentage changes shown in the last column of Table II equal the estimated percentage changes in average payments per discharge from Column 7 of Table I.

**TABLE II.--IMPACT ANALYSIS OF CHANGES FOR FY 2019 ACUTE CARE  
HOSPITAL OPERATING PROSPECTIVE PAYMENT SYSTEM  
(PAYMENTS PER DISCHARGE)**

	<b>Number of Hospitals (1)</b>	<b>Estimated Average FY 2018 Payment Per Discharge (2)</b>	<b>Estimated Average FY 2019 Payment Per Discharge (3)</b>	<b>FY 2019 Changes (4)</b>
<b>All Hospitals</b>	3256	12,172	12,463	2.4
<b>By Geographic Location:</b>				
Urban hospitals	2483	12,508	12,819	2.5
Large urban areas	1302	12,986	13,304	2.4
Other urban areas	1181	12,049	12,354	2.5
Rural hospitals	773	9,194	9,308	1.2
<b>Bed Size (Urban):</b>				
0-99 beds	644	9,945	10,114	1.7
100-199 beds	763	10,399	10,622	2.2
200-299 beds	433	11,384	11,649	2.3
300-499 beds	424	12,606	12,916	2.5
500 or more beds	219	15,449	15,894	2.9
<b>Bed Size (Rural):</b>				
0-49 beds	306	7,836	7,908	0.9
50-99 beds	274	8,746	8,844	1.1
100-149 beds	108	9,150	9,257	1.2
150-199 beds	45	9,667	9,806	1.4
200 or more beds	40	10,734	10,900	1.6
<b>Urban by Region:</b>				
New England	113	13,491	14,132	4.7
Middle Atlantic	310	14,099	14,429	2.3
South Atlantic	401	11,145	11,373	2.1
East North Central	386	11,830	12,073	2.1
East South Central	147	10,517	10,742	2.1
West North Central	158	12,266	12,525	2.1
West South Central	379	11,310	11,575	2.3
Mountain	164	12,938	13,212	2.1
Pacific	374	15,773	16,284	3.2

	<b>Number of Hospitals (1)</b>	<b>Estimated Average FY 2018 Payment Per Discharge (2)</b>	<b>Estimated Average FY 2019 Payment Per Discharge (3)</b>	<b>FY 2019 Changes (4)</b>
Puerto Rico	51	9,117	9,186	0.8
<b>Rural by Region:</b>				
New England	20	12,613	12,729	0.9
Middle Atlantic	53	9,137	9,265	1.4
South Atlantic	122	8,497	8,599	1.2
East North Central	114	9,444	9,552	1.1
East South Central	150	8,142	8,286	1.8
West North Central	94	10,019	10,112	0.9
West South Central	145	7,844	7,959	1.5
Mountain	52	11,128	11,215	0.8
Pacific	23	12,734	12,858	1
<b>By Payment Classification:</b>				
Urban hospitals	2264	12,276	12,558	2.3
Large urban areas	1317	12,974	13,291	2.4
Other urban areas	947	11,325	11,559	2.1
Rural areas	992	11,833	12,154	2.7
<b>Teaching Status:</b>				
Nonteaching	2157	10,059	10,266	2.1
Fewer than 100 residents	849	11,616	11,867	2.2
100 or more residents	250	17,680	18,221	3.1
<b>Urban DSH:</b>				
Non-DSH	520	10,533	10,749	2.1
100 or more beds	1462	12,643	12,939	2.3
Less than 100 beds	367	9,220	9,398	1.9
<b>Rural DSH:</b>				
SCH	256	10,239	10,313	0.7
RRC	382	12,516	12,899	3.1
100 or more beds	33	13,322	13,713	2.9
Less than 100 beds	236	7,300	7,411	1.5
<b>Urban teaching and DSH:</b>				
Both teaching and DSH	805	13,783	14,113	2.4
Teaching and no DSH	89	11,402	11,665	2.3

	<b>Number of Hospitals (1)</b>	<b>Estimated Average FY 2018 Payment Per Discharge (2)</b>	<b>Estimated Average FY 2019 Payment Per Discharge (3)</b>	<b>FY 2019 Changes (4)</b>
No teaching and DSH	1024	10,322	10,548	2.2
No teaching and no DSH	346	9,951	10,126	1.8
<b>Special Hospital Types:</b>				
RRC	327	12,440	12,860	3.4
SCH	312	11,125	11,218	0.8
MDH	140	7,958	8,057	1.2
SCH and RRC	134	11,502	11,640	1.2
MDH and RRC	16	10,039	10,150	1.1
<b>Type of Ownership:</b>				
Voluntary	1899	12,323	12,623	2.4
Proprietary	856	10,658	10,880	2.1
Government	501	13,378	13,709	2.5
<b>Medicare Utilization as a Percent of Inpatient Days:</b>				
0-25	602	14,927	15,267	2.3
25-50	2139	11,996	12,294	2.5
50-65	421	9,817	9,986	1.7
Over 65	73	7,271	7,451	2.5
<b>FY 2019 Reclassifications by the Medicare Geographic Classification Review Board:</b>				
All Reclassified Hospitals	856	12,174	12,516	2.8
Non-Reclassified Hospitals	2400	12,171	12,439	2.2
Urban Hospitals Reclassified	585	12,761	13,149	3
Urban Nonreclassified Hospitals	1838	12,374	12,656	2.3
Rural Hospitals Reclassified Full Year	271	9,566	9,711	1.5
Rural Nonreclassified Hospitals Full Year	455	8,753	8,824	0.8

	<b>Number of Hospitals (1)</b>	<b>Estimated Average FY 2018 Payment Per Discharge (2)</b>	<b>Estimated Average FY 2019 Payment Per Discharge (3)</b>	<b>FY 2019 Changes (4)</b>
All Section 401 Reclassified Hospitals:	266	13,625	14,088	3.4
Other Reclassified Hospitals (Section 1886(d)(8)(B))	47	8,609	8,736	1.5

H. Effects of Other Policy Changes

In addition to those policy changes discussed previously that we are able to model using our IPPS payment simulation model, we are making various other changes in this final rule. As noted in section I.G. of this Regulatory Impact Analysis, our payment simulation model uses the most recent available claims data to estimate the impacts on payments per case of certain changes in this final rule. Generally, we have limited or no specific data available with which to estimate the impacts of these changes using that payment simulation model. For those changes, we have attempted to predict the payment impacts based upon our experience and other more limited data. Our estimates of the likely impacts associated with these other changes are discussed in this section.

1. Effects of Policy Relating to New Medical Service and Technology Add-On Payments

In section II.H. of the preamble to this final rule, we discuss 11 technologies for which we received applications for add-on payments for new medical services and technologies for FY 2019. We note that three applicants withdrew their applications prior to the issuance of this final rule, and one applicant did not receive FDA approval for

its technology by the July 1 deadline. We also discuss the status of the new technologies that were approved to receive new technology add-on payments in FY 2018. As explained in the preamble to this final rule, add-on payments for new medical services and technologies under section 1886(d)(5)(K) of the Act are not required to be budget neutral.

As discussed in section II.H.5. of the preamble of this final rule, we are approving the following nine applications for new technology add-on payments for FY 2019: KYMRIA<sup>®</sup> (Tisagenlecleucel) and YESARTA<sup>®</sup> (Axicabtagene Ciloleucel); VYXEOS<sup>™</sup> (Cytarabine and Daunorubicin Liposome for Injection); VABOMERE<sup>™</sup> (meropenem-vaborbactam); remedē<sup>®</sup> System; ZEMDRI<sup>™</sup> (Plazomicin); GIAPREZA<sup>™</sup>; Sentinel<sup>®</sup> Cerebral Protection System; The AQUABEAM System (Aquablation); and AndexXa<sup>™</sup> (Andexanet alfa). In addition, as we proposed, in this final rule, we are continuing to make new technology add-on payments for Defitelio<sup>®</sup> (Defibrotide), Ustekinumab (Stelara<sup>®</sup>) and Bezlotoxumab (Zinplava<sup>™</sup>) in FY 2019 because these technologies are still considered new. (As discussed in section II.H.5. of the preamble of this final rule, as we proposed, we are discontinuing new technology add-on payments for Idarucizumab, GORE<sup>®</sup> EXCLUDER<sup>®</sup> Iliac Branch Endoprosthesis (IBE), Edwards/Perceval Sutureless Valves, and Vistogard<sup>™</sup> (Uridine Triacetate) for FY 2019 because these technologies will have been on the U.S. market for 3 years.)

We note that new technology add-on payments for each case are limited to the lesser of (1) 50 percent of the costs of the new technology or (2) 50 percent of the amount by which the costs of the case exceed the standard MS-DRG payment for the case.

Because it is difficult to predict the actual new technology add-on payment for each case, our estimates below are based on the increase in new technology add-on payments for FY 2019 as if every claim that would qualify for a new technology add-on payment would receive the maximum add-on payment.

The following are estimates for FY 2019 for the three technologies for which we are continuing to make new technology add-on payments in FY 2019:

- Based on the applicant's estimate from FY 2017 and the updated cost information provided by the applicant (discussed in section II.H.4.a. of the preamble of this final rule), we currently estimate that new technology add-on payments for Defitelio<sup>®</sup> will increase overall FY 2019 payments by \$5,474,000 (maximum add-on payment of \$80,500 \* 68 patients).

- Based on the applicant's estimate from FY 2018, we currently estimate that new technology add-on payments for Ustekinumab (Stelara<sup>®</sup>) will increase overall FY 2019 payments by \$400,800 (maximum add-on payment of \$2,400 \* 167 patients).

- Based on the applicant's estimate for FY 2018, we currently estimate that new technology add-on payments for Bezlotoxumab (Zinplava<sup>™</sup>) will increase overall FY 2019 payments by \$2,857,600 (maximum add-on payment of \$1,900 \* 1,504 patients).

The following are estimates for FY 2019 for the nine technologies that we are approving for new technology add-on payments beginning with FY 2019

- Based on both applicants' estimates of the average cost for an administered dose for FY 2019, we currently estimate that new technology add-on payments for

KYMRIAH<sup>®</sup> and YESCARTA<sup>®</sup> will increase overall FY 2019 payments by \$71,989,000 (maximum add-on payment of \$186,500 \* 373 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for VYXEOS<sup>™</sup> will increase overall FY 2019 payments by \$34,968,000 (maximum add-on payment of \$36,425\* 960 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for VABOMERE<sup>™</sup> will increase overall FY 2019 payments by \$14,680,512 (maximum add-on payment of \$5,544 \* 2,648 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for remedē<sup>®</sup> System will increase overall FY 2019 payments by \$1,380,000 (maximum add-on payment of \$17,250 \* 80 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for ZEMDRI<sup>™</sup> will increase overall FY 2019 payments by \$6,806,250 (maximum add-on payment of \$2,722.50 \* 2,500 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for GIAPREZA<sup>™</sup> will increase overall FY 2019 payments by \$8,595,000 (maximum add-on payment of \$1,500 \* 5,730 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for Sentinel<sup>®</sup> Cerebral Protection System will increase overall FY 2019 payments by \$9,100,000 (maximum add-on payment of \$1,400 \* 6,500 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for the AQUABEAM System (Aquablation) will increase overall FY 2019 payments by \$521,250 (maximum add-on payment of \$1,250 \* 417 patients).

- Based on the applicant's estimate for FY 2019, we currently estimate that new technology add-on payments for AndexXa™ will increase overall FY 2019 payments by \$75,965,625 (maximum add-on payment of \$14,062.50 \* 5,402 patients).

## 2. Effects of Changes to MS-DRGs Subject to the Postacute Care Transfer Policy and the MS-DRG Special Payment Policy

In section IV.A. of the preamble of this final rule, we discuss our changes to the list of MS-DRGs subject to the postacute care transfer policy and the MS-DRG special payment policy. As reflected in Table 5 listed in section VI. of the Addendum to this final rule (which is available via the Internet on the CMS website), using criteria set forth in regulations at 42 CFR 412.4, we evaluated MS-DRG charge, discharge, and transfer data to determine which new or revised MS-DRGs will qualify for the postacute care transfer and MS-DRG special payment policies. As a result of our policies to revise the MS-DRG classifications for FY 2019, which are discussed in section II.F. of the preamble of this final rule, we are including additions to the list of MS-DRGs subject to the MS-DRG special payment policy. Column 2 of Table I in this Appendix A shows the effects of the changes to the MS-DRGs and the relative payment weights and the application of the recalibration budget neutrality factor to the standardized amounts. Section 1886(d)(4)(C)(i) of the Act requires us annually to make appropriate DRG classification changes in order to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources. The analysis and methods for determining the changes due to the MS-DRGs and relative payment weights account for and include changes as a result of the changes to the MS-DRGs subject to the MS-DRG postacute care transfer and MS-DRG special payment policies. We refer readers to section I.G. of this Appendix A for a detailed discussion of payment impacts due to the MS-DRG reclassification policies for FY 2019.

In section IV.A.2.b. of the preamble of this final rule, we discuss our conforming changes to the regulations at § 412.4(c) to reflect the amendments to section 1886(d)(5)(J) of the Act made by section 53109 of the Bipartisan Budget Act of 2018. Section 53109 of the Bipartisan Budget Act of 2018 amended section 1886(d)(5)(J) of the Act to include discharges to hospice services provided by a hospice program as a “qualified discharge” under the postacute care transfer policy, effective for discharges occurring on or after October 1, 2018. To implement this change, we are establishing that discharges using Patient Discharge Status code of 50 (Discharged/Transferred to Hospice - Routine or Continuous Home Care) or 51 (Discharged/Transferred to Hospice, General Inpatient Care or Inpatient Respite) will be subject to the postacute care transfer policy, effective for discharges occurring on or after October 1, 2018. Our actuaries estimate that this change in the postacute care transfer policy will generate an annual savings of approximately \$240 million in Medicare payments in FY 2019, and up to \$540 million annually by FY 2028.

### 3. Effects of Changes to Low-Volume Hospital Payment Adjustment Policy

In section IV.D. of the preamble of this final rule, we discuss the changes to the low-volume hospital payment policy for FY 2019 to implement the provisions of section 50204 of the Bipartisan Budget Act of 2018. Specifically, for FY 2019, qualifying hospitals must have less than 3,800 combined Medicare and non-Medicare discharges (instead of 1,600 Medicare discharges) and must be located more than 15 road miles from another subsection (d) hospital. Section 50204 of the Bipartisan Budget Act of 2018 also modified the methodology for calculating the payment adjustment for low-volume

hospitals for FYs 2019 through 2022. To implement these requirements, we are establishing that the low-volume hospital payment adjustment will be determined as follows:

- For low-volume hospitals with 500 or fewer total discharges during the fiscal year, an additional 25 percent for each Medicare discharge.
- For low-volume hospitals with total discharges during the fiscal year of more than 500 and fewer than 3,800, an additional percent calculated using the formula  $[(95/330) - (\text{number of total discharges}/13,200)]$  for each Medicare discharge.

Based upon the best available data at this time, we estimate the changes to the low-volume hospital payment adjustment policy that we are implementing in accordance with section 50204 of the Bipartisan Budget Act of 2018 will increase Medicare payments by \$75 million in FY 2019 as compared to FY 2018. More specifically, in FY 2019, we estimate that 628 providers will receive approximately \$426 million compared to our estimate of 612 providers receiving approximately \$350 million in FY 2018. These payment estimates were determined by identifying providers that, based on the best available data, are expected to qualify under the criteria that will apply in FY 2019 (that is, are located at least 15 miles from the nearest subsection (d) hospital and have less than 3,800 total discharges), and were determined from the same data used in developing the quantitative analyses of changes in payments per case discussed previously in section I.G. of this Appendix A.

#### 4. Effects of the Changes to Medicare DSH and Uncompensated Care Payments for FY 2019

As discussed in section IV.F. of the preamble of this final rule, under section 3133 of the Affordable Care Act, hospitals that are eligible to receive Medicare DSH payments will receive 25 percent of the amount they previously would have received under the statutory formula for Medicare DSH payments under section 1886(d)(5)(F) of the Act. The remainder, equal to an estimate of 75 percent of what formerly would have been paid as Medicare DSH payments (Factor 1), reduced to reflect changes in the percentage of uninsured individuals and additional statutory adjustments (Factor 2), is available to make additional payments to each hospital that qualifies for Medicare DSH payments and that has uncompensated care. Each hospital eligible for Medicare DSH payments will receive an additional payment based on its estimated share of the total amount of uncompensated care for all hospitals eligible for Medicare DSH payments. The uncompensated care payment methodology has redistributive effects based on the proportion of a hospital's amount of uncompensated care relative to the aggregate amount of uncompensated care of all hospitals eligible for Medicare DSH payments (Factor 3). The change to Medicare DSH payments under section 3133 of the Affordable Care Act is not budget neutral.

In this final rule, we are establishing the amount to be distributed as uncompensated care payments to DSH eligible hospitals, which for FY 2019 is \$8,272,872,447.22. This figure represents 75 percent of the amount that otherwise would have been paid for Medicare DSH payment adjustments adjusted by a Factor 2 of 67.51 percent. For FY 2018, the amount available to be distributed for uncompensated care was \$6,766,695,163.56, or 75 percent of the amount that otherwise would have been paid

for Medicare DSH payment adjustments adjusted by a Factor 2 of 58.01 percent. To calculate Factor 3 for FY 2019, we used an average of data computed using Medicaid days from hospitals' 2013 cost reports from the HCRIS database as updated through June 30, 2018, uncompensated care costs from hospitals' 2014 and 2015 cost reports from the same extract of HCRIS, and SSI days from the FY 2016 SSI ratios. For each eligible hospital, with the exception of Puerto Rico hospitals, all-inclusive rate providers, and Indian Health Service and Tribal hospitals, we calculated a Factor 3 using information from cost reports for FYs 2013, 2014, and 2015. To calculate Factor 3 for Puerto Rico hospitals, all-inclusive rate providers, and Indian Health Service and Tribal hospitals, we used data regarding low-income insured days for FY 2013. For a complete discussion of the methodology for calculating Factor 3, we refer readers to section IV.F.4. of the preamble of this final rule.

To estimate the impact of the combined effect of changes in Factors 1 and 2, as well as the changes to the data used in determining Factor 3, on the calculation of Medicare uncompensated care payments (UCP), we compared total UCP estimated in the FY 2018 IPPS/LTCH PPS final rule to total UCP estimated in this FY 2019 IPPS/LTCH PPS final rule. For FY 2018, for each hospital, we calculated 75 percent of the estimated amount that would have been paid as Medicare DSH payments in the absence of section 3133 of the Affordable Care Act, adjusted by a Factor 2 of 58.01 percent and multiplied by a Factor 3 calculated as described in the FY 2018 IPPS/LTCH PPS final rule. For FY 2019, we calculated 75 percent of the estimated amount that would be paid as Medicare DSH payments absent section 3133 of the Affordable Care Act, adjusted by a

Factor 2 of 67.51 percent and multiplied by a Factor 3 calculated using the methodology described previously.

Our analysis included 2,448 hospitals that are projected to be eligible for DSH in FY 2019. It did not include hospitals that terminated their participation from the Medicare program as of January 1, 2018, Maryland hospitals, new hospitals, MDHs, and SCHs that are expected to be paid based on their hospital-specific rates. The 29 hospitals participating in the Rural Community Hospital Demonstration Program were excluded in this final rule, as participating hospitals are not eligible to receive empirically justified Medicare DSH payments and uncompensated care payments. In addition, low-income insured days and uncompensated care costs from merged or acquired hospitals were combined into the surviving hospital’s CMS certification number (CCN), and the nonsurviving CCN was excluded from the analysis. The estimated impact of the changes in Factors 1, 2, and 3 on uncompensated care payments across all hospitals projected to be eligible for DSH payments in FY 2019, by hospital characteristic, is presented in the following table.

<b>Modeled Uncompensated Care Payments for Estimated FY 2019 DSHs by Hospital Type: Model UCP \$ (in Millions)* from FY 2018 to FY 2019</b>					
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
	<b>Number of Estimated DSHs</b>	<b>FY 2018 Final Rule CN Estimated UCP \$ (in Millions)</b>	<b>FY 2019 Final Rule Estimated UCP \$ (in Millions)</b>	<b>Dollar Difference: FY 2019 - FY 2018 (in Millions)</b>	<b>Percent Change**</b>
<b>Total</b>	2,448	\$6,767	\$8,273	\$1,506	22.26%
<b>By Geographic</b>					

<b>Modeled Uncompensated Care Payments for Estimated FY 2019 DSHs by Hospital Type: Model UCP \$ (in Millions)* from FY 2018 to FY 2019</b>					
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
	<b>Number of Estimated DSHs</b>	<b>FY 2018 Final Rule CN Estimated UCP \$ (in Millions)</b>	<b>FY 2019 Final Rule Estimated UCP \$ (in Millions)</b>	<b>Dollar Difference: FY 2019 - FY 2018 (in Millions)</b>	<b>Percent Change**</b>
<b>Location</b>					
Urban Hospitals	1,952	\$6,422	\$7,802	\$1,380	21.48%
Large Urban Areas	1,045	\$3,847	\$4,705	\$858	22.30%
Other Urban Areas	907	\$2,575	\$3,097	\$522	20.26%
Rural Hospitals	495	\$345	\$471	\$126	36.66%
<b>Bed Size (Urban)</b>					
0 to 99 Beds	342	\$177	\$257	\$80	44.83%
100 to 249 Beds	859	\$1,519	\$1,902	\$383	25.23%
250+ Beds	751	\$4,726	\$5,643	\$917	19.40%
<b>Bed Size (Rural)</b>					
0 to 99 Beds	366	\$164	\$229	\$65	39.52%
100 to 249 Beds	116	\$146	\$199	\$53	36.35%
250+ Beds	13	\$34	\$43	\$8	24.35%
<b>Urban by Region</b>					
New England	91	\$259	\$279	\$20	7.75%
Middle Atlantic	244	\$1,004	\$1,059	\$55	5.51%
South Atlantic	320	\$1,343	\$1,769	\$426	31.72%
East North Central	323	\$864	\$1,010	\$146	16.85%
East South Central	133	\$389	\$477	\$88	22.73%
West North Central	104	\$312	\$386	\$73	23.49%
West South Central	254	\$981	\$1,424	\$442	45.06%
Mountain	125	\$313	\$397	\$83	26.61%
Pacific	318	\$874	\$899	\$25	2.89%
Puerto Rico	40	\$82	\$102	\$20	24.46%
<b>Rural by Region</b>					
New England	9	\$14	\$17	\$3	19.26%
Middle Atlantic	27	\$19	\$22	\$2	12.45%
South Atlantic	88	\$79	\$116	\$37	47.57%
East North Central	69	\$40	\$56	\$16	41.15%
East South Central	135	\$93	\$106	\$13	13.80%
West North Central	29	\$16	\$22	\$6	40.31%

<b>Modeled Uncompensated Care Payments for Estimated FY 2019 DSHs by Hospital Type: Model UCP \$ (in Millions)* from FY 2018 to FY 2019</b>					
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
	<b>Number of Estimated DSHs</b>	<b>FY 2018 Final Rule CN Estimated UCP \$ (in Millions)</b>	<b>FY 2019 Final Rule Estimated UCP \$ (in Millions)</b>	<b>Dollar Difference: FY 2019 - FY 2018 (in Millions)</b>	<b>Percent Change**</b>
West South Central	106	\$66	\$102	\$36	53.66%
Mountain	27	\$14	\$26	\$12	84.19%
Pacific	5	\$4	\$5	\$1	24.86%
<b>By Payment Classification</b>					
Urban Hospitals	1,865	\$5,917	\$7,257	\$1,340	22.66%
Large Urban Areas	1,057	\$3,855	\$4,716	\$861	22.34%
Other Urban Areas	808	\$2,062	\$2,541	\$479	23.24%
Rural Hospitals	582	\$850	\$1,016	\$166	19.49%
<b>Teaching Status</b>					
Nonteaching	1,509	\$2,020	\$2,598	\$578	28.62%
Fewer than 100 residents	694	\$2,246	\$2,744	\$497	22.14%
100 or more residents	244	\$2,501	\$2,932	\$431	17.23%
<b>Type of Ownership</b>					
Voluntary	1,448	\$4,137	\$4,894	\$757	18.30%
Proprietary	561	\$1,015	\$1,259	\$244	24.06%
Government	439	\$1,615	\$2,119	\$505	31.26%
<b>Medicare Utilization Percent***</b>					
0 to 25	472	\$2,255	\$2,720	\$465	20.60%
25 to 50	1,674	\$4,290	\$5,266	\$976	22.76%
50 to 65	263	\$215	\$277	\$62	28.59%
Greater than 65	36	\$7	\$11	\$4	56.59%
Source: Dobson   DaVanzo analysis of 2013-2015 Hospital Cost Reports					
*Dollar UCP calculated by [0.75 * estimated section 1886(d)(5)(F) payments * Factor 2 * Factor 3]. When summed across all hospitals projected to receive DSH payments, uncompensated care payments are estimated to be \$6,767 million in FY 2018 and \$8,273 million in FY 2019.					

<b>Modeled Uncompensated Care Payments for Estimated FY 2019 DSHs by Hospital Type: Model UCP \$ (in Millions)* from FY 2018 to FY 2019</b>					
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
	<b>Number of Estimated DSHs</b>	<b>FY 2018 Final Rule CN Estimated UCP \$ (in Millions)</b>	<b>FY 2019 Final Rule Estimated UCP \$ (in Millions)</b>	<b>Dollar Difference: FY 2019 - FY 2018 (in Millions)</b>	<b>Percent Change**</b>
** Percentage change is determined as the difference between Medicare UCP payments modeled for this FY 2019 IPPS/LTCH PPS final rule (column 3) and Medicare UCP payments modeled for the FY 2018 IPPS/LTCH PPS final rule correction notice (column 2) divided by Medicare UCP payments modeled for the FY 2018 final rule correction notice (column 2) times 100 percent. ***Hospitals with Missing or Unknown Medicare Utilization are not shown in table.					

Changes in projected FY 2019 uncompensated care payments from payments in FY 2018 are driven by increases in Factor 1 and Factor 2, as well as by an increase in the number of hospitals eligible to receive DSH in FY 2019 relative to FY 2018. Factor 1 has increased from \$11.665 billion to \$12.254 billion, and the percent change in the percent of individuals who are uninsured (Factor 2) has increased from 58.01 percent to 67.51 percent. Based on the increases in these two factors, the impact analysis found that, across all projected DSH eligible hospitals, FY 2019 uncompensated care payments are estimated at approximately \$8.273 billion, or an increase of approximately 22.26 percent from FY 2018 uncompensated care payments (approximately \$6.767 billion). While these changes will result in a net increase in the amount available to be distributed in uncompensated care payments, the projected payment increases vary by hospital type. This redistribution of uncompensated care payments is caused by changes in Factor 3.

As seen in the above table, percent increases smaller than 22.26 percent indicate that hospitals within the specified category are projected to experience a smaller increase

in uncompensated care payments, on average, compared to the universe of projected FY 2019 DSH hospitals. Conversely, percent increases that are greater than 22.26 percent indicate a hospital type is projected to have a larger increase than the overall average. The variation in the distribution of payments by hospital characteristic is largely dependent on a given hospital's number of Medicaid days and SSI days, as well as its uncompensated care costs as reported in the Worksheet S-10, used in the Factor 3 computation.

Many rural hospitals are projected to experience larger increases in uncompensated care payments than their urban counterparts. Overall, rural hospitals are projected to receive a 36.66 percent increase in uncompensated care payments, while urban hospitals are projected to receive a 21.48 percent increase in uncompensated care payments.

By bed size, smaller hospitals are projected to receive larger increases in uncompensated care payments than larger hospitals, in both rural and urban settings. Rural hospitals with 0–99 beds are projected to receive a 39.52 percent payment increase, rural hospitals with 100–249 beds are projected to see a 36.35 percent increase, and larger rural hospitals with 250+ beds are projected to experience a 24.35 percent payment increase. These increases for rural hospitals are all greater than the overall hospital average. This trend is consistent with urban hospitals, in which the smallest urban hospitals (0–99 beds) are projected to receive an increase in uncompensated care payments of 44.83 percent, and urban hospitals with 100–250 beds are projected to receive an increase of 25.23 percent, both of which are greater than the overall average.

Larger urban hospitals with 250+ beds are projected to receive a 19.40 percent increase in uncompensated care payments, which is smaller than the overall average.

By region, rural hospitals are expected to receive a wide range of payment increases. Rural hospitals in the Mountain region are expected to receive a larger than average increase in uncompensated care payments, as are rural hospitals in the West South Central, South Atlantic, East North Central, West North Central, and Pacific regions. Rural hospitals in the New England, East South Central, and Middle Atlantic regions are projected to receive smaller than average payment increases. Regionally, urban hospitals are projected to receive a narrower range of payment changes. Smaller than average increases in uncompensated care payments are projected in the Pacific, Middle Atlantic, New England, and East North Central regions. Urban hospitals in the West South Central, South Atlantic, and Mountain regions are projected to receive a larger than average increase in uncompensated payments, as are hospitals in Puerto Rico. The projected increases in the East South Central and West North Central regions are generally consistent with the overall average increase of 22.26 percent.

Nonteaching hospitals are projected to receive a larger than average payment increase of 28.62 percent. Teaching hospitals with fewer than 100 residents are projected to receive a payment increase of 22.14 percent, which is consistent with the overall average, while those teaching hospitals with 100+ residents have a projected payment increase of 17.23 percent, lower than the overall average. Government and proprietary hospitals are projected to receive larger than average increases (31.26 percent and 24.06 percent, respectively), while voluntary hospitals are expected to receive increases lower

than the overall average at 18.30 percent. Hospitals with 0 to 25 percent Medicare utilization are projected to receive increases in uncompensated care payments slightly below the overall average, while hospitals with higher levels of Medicare utilization are projected to receive larger increases.

#### 5. Effects of Reductions Under the Hospital Readmissions Reduction Program for FY 2019

In section IV.H. of the preamble of the this final rule, we discuss our finalized policies for the FY 2019 Hospital Readmissions Reduction Program. This program requires a reduction to a hospital's base operating DRG payment to account for excess readmissions of selected applicable conditions. The table and analysis below illustrate the estimated financial impact of the Hospital Readmissions Reduction Program payment adjustment methodology by hospital characteristic. As outlined in section IV.H. of the preamble of this final rule, hospitals are stratified into quintiles based on the proportion of dual-eligible stays among Medicare fee-for-service (FFS) and managed care stays between July 1, 2014 and June 30, 2017 (that is, the FY 2019 Hospital Readmissions Reduction Program's performance period). Hospitals' excess readmission ratios (ERRs) are assessed relative to their peer group median and a neutrality modifier is applied in the payment adjustment factor calculation to maintain budget neutrality. To analyze the results by hospital characteristic, we used the FY 2019 IPPS/LTCH Proposed Rule Impact File.

These analyses include 3,062 non-Maryland hospitals eligible to receive a penalty during the performance period. Hospitals are eligible to receive a penalty if they have

25 or more eligible discharges for at least one measure between July 1, 2014 and June 30, 2017. The second column in the table indicates the total number of non-Maryland hospitals with available data for each characteristic that have an estimated payment adjustment factor less than 1 (that is, penalized hospitals).

The third column in the table indicates the percentage of penalized hospitals among those eligible to receive a penalty by hospital characteristic. For example, 82.26 percent of eligible hospitals characterized as non-teaching hospitals are expected to be penalized. Among teaching hospitals, 88.60 percent of eligible hospitals with fewer than 100 residents and 93.95 percent of eligible hospitals with 100 or more residents are expected to be penalized.

The fourth column in the table estimates the financial impact on hospitals by hospital characteristics. The table shows the share of penalties as a percentage of all base operating Diagnosis Related-Group (DRG) payments for hospitals with each characteristic. This is calculated as the sum of penalties for all hospitals with that characteristic over the sum of all base operating DRG payments for those hospitals between October 1, 2016 and September 30, 2017 (FY 2017). For example, the penalty as a share of payments for urban hospitals is 0.70 percent. This means that total penalties for all urban hospitals are 0.70 percent of total payments for urban hospitals. Measuring the financial impact on hospitals as a percentage of total base operating DRG payments accounts for differences in the amount of base operating DRG payments for hospitals within the characteristic when comparing the financial impact of the program on different groups of hospitals.

<b>Estimated Percentage of Hospitals Penalized and Penalty as Share of Payments for FY 2019 Hospital Readmissions Reduction Program by Hospital Characteristic</b>				
<b>Hospital Characteristic</b>	<b>Number of Eligible Hospitals<sup>[a]</sup></b>	<b>Number of Penalized Hospitals<sup>[b]</sup></b>	<b>Percentage of Hospitals Penalized<sup>[c]</sup> (%)</b>	<b>Penalty as a share of payments<sup>[d]</sup> (%)</b>
<b>All Hospitals</b>	3,062	2,599	84.88	0.67
<b>Geographic Location<sup>[e]</sup> (n= 3,062)</b>				
<b>Urban hospitals</b>	2,297	1,983	86.33	0.70
1-99 beds	534	377	70.60	0.94
100-199 beds	714	649	90.90	0.83
200-299 beds	417	378	90.65	0.81
300-399 beds	275	253	92.00	0.72
400-499 beds	144	130	90.28	0.56
500 or more beds	213	196	92.02	0.58
<b>Rural hospitals</b>	765	616	80.52	0.72
1-49 beds	285	197	69.12	0.66
50-99 beds	282	242	85.82	0.65
100-149 beds	115	104	90.43	0.75
150-199 beds	44	35	79.55	0.67
200 or more beds	39	38	97.44	0.85
<b>Teaching Status<sup>[f]</sup> (n= 3,062)</b>				
Non-teaching	2,007	1,651	82.26	0.82
Fewer than 100 Residents	807	715	88.60	0.71
100 or more Residents	248	233	93.95	0.52
<b>Ownership Type (n= 3,043)</b>				
Government	476	399	83.82	0.54
Proprietary	748	619	82.75	1.05
Voluntary	1,819	1,573	86.48	0.66
<b>Safety-net Status<sup>[g]</sup> (n= 3,062)</b>				
Safety net hospitals	614	531	86.48	0.60
Non-safety net Hospitals	2,448	2,068	84.48	0.73
<b>Disproportionate Share Hospital (DSH) Patient Percentage<sup>[h]</sup> (n= 3,062)</b>				
0-24	1,221	997	81.65	0.80

25-49	1,485	1,293	87.07	0.66
50-64	189	171	90.48	0.66
65 and over	167	138	82.63	0.63
<b>Medicare Cost Report (MCR) Percent<sup>[f]</sup> (n= 3,048)</b>				
0-24	432	364	84.26	0.49
25-49	2,087	1,802	86.34	0.71
50-64	467	381	81.58	0.98
65 and over	62	42	67.74	0.94
<b>Region (n= 3,062)</b>				
New England	129	114	88.37	0.89
Middle Atlantic	352	320	90.91	0.89
South Atlantic	509	461	90.57	0.79
East North Central	482	421	87.34	0.62
East South Central	289	253	87.54	0.90
West North Central	246	193	78.46	0.44
West South Central	474	384	81.01	0.68
Mountain	217	163	75.12	0.57
Pacific	364	290	79.67	0.48

**Source:** The table results are based on the estimated FY 2019 payment adjustment factors of open, non-Maryland, subsection (d) hospitals only. FY 2019 payment adjustment factors are based on discharges between July 1, 2014 and June 30, 2017. Although data from all subsection (d) and Maryland hospitals are used in calculations of each hospital's ERR, this table does not include results for Maryland hospitals and hospitals that are not open as of the October 2018 public reporting open hospital list since these hospitals are not eligible for a penalty under the program. Hospitals are stratified into quintiles based on the proportion of FFS and managed care dual-eligible stays for the 3-year FY 2019 performance period. Hospital characteristics are from the FY 2019 IPPS/LTCH Proposed Rule Impact File.

<sup>a</sup> This column is the number of applicable hospitals within the characteristic that are eligible for a penalty (that is, they have 25 or more eligible discharges for at least one measure).

<sup>b</sup> This column is the number of applicable hospitals that are penalized (that is, they have 25 or more eligible discharges for at least one measure and an estimated payment adjustment factor less than 1) within the characteristic.

<sup>c</sup> This column is the percentage of applicable hospitals that are penalized among hospitals that are eligible to receive a penalty by characteristic.

<sup>d</sup> This column is calculated as the sum of all penalties for the group of hospitals with that characteristic divided by total base operating DRG payments for all those hospitals. MedPAR data from October 1, 2016 through September 30, 2017 (FY 2017) are used to calculate the total base operating DRG payments.

<sup>e</sup> The total number of hospitals with hospital characteristics data may not add up to the total number of hospitals because not all hospitals have data for all characteristics. All hospitals had information for: geographic location, bed size by geographic region, teaching status, safety-net status, DSH patient percentage, and region (n=3,062). Not all hospitals had data for ownership type (n=3,043; missing=19) and MCR percent (n=3,048; missing=14).

<sup>f</sup> A hospital is considered a teaching hospital if it has an Indirect Medical Education adjustment factor for Operation PPS (TCHOP) greater than zero.

<sup>g</sup> A hospital is considered a safety-net hospital if it is in the top DSH quintile.

<sup>h</sup> DSH patient percentage is the sum of the percentage of Medicare inpatient days attributable to patients entitled to both Medicare Part A and Supplemental Security Income (SSI), and the percentage of total inpatient days attributable to patients eligible for Medicaid but not entitled to Medicare Part A.

<sup>1</sup> MCR percent is the percentage of total inpatient stays from Medicare patients.

## 6. Effects of Changes under the FY 2019 Hospital Value-Based Purchasing (VBP) Program

### a. Effects of Proposed Changes for FY 2019

In section IV.I. of the preamble of this final rule, we discuss the Hospital VBP Program under which the Secretary makes value-based incentive payments to hospitals based on their performance on measures during the performance period with respect to a fiscal year. These incentive payments will be funded for FY 2019 through a reduction to the FY 2019 base operating DRG payment amount for the discharge for the hospital for such fiscal year, as required by section 1886(o)(7)(B) of the Act. The applicable percentage for FY 2019 and subsequent years is 2 percent. The total amount available for value-based incentive payments must be equal to the total amount of reduced payments for all hospitals for the fiscal year, as estimated by the Secretary.

In section IV.I.1.b. of the preamble of this final rule, we estimate the available pool of funds for value-based incentive payments in the FY 2019 program year, which, in accordance with section 1886(o)(7)(C)(v) of the Act, will be 2.00 percent of base operating DRG payments, or a total of approximately \$1.9 billion. This estimated available pool for FY 2019 is based on the historical pool of hospitals that were eligible to participate in the FY 2018 program year and the payment information from the March 2018 update to the FY 2017 MedPAR file.

The proposed estimated impacts of the FY 2019 program year by hospital characteristic, found in the table below, are based on historical TPSs. We used the FY 2018 program year's TPSs to calculate the proxy adjustment factors used for this impact analysis. These are the most recently available scores that hospitals were given an opportunity to review and correct. The proxy adjustment factors use estimated annual base operating DRG payment amounts derived from the March 2018 update to the FY 2017 MedPAR file. The proxy adjustment factors can be found in Table 16A associated with this final rule (available via the Internet on the CMS website).

The impact analysis shows that, for the FY 2019 program year, the number of hospitals that would receive an increase in their base operating DRG payment amount is higher than the number of hospitals that would receive a decrease. On average, urban hospitals in the West North Central region and rural hospitals in Mountain region would have the highest positive percent change in base operating DRG. Urban Middle Atlantic, urban South Atlantic, and urban East South Central regions would experience an average negative percent change in base operating DRG. All other regions, both urban and rural, would have an average positive percent change in base operating DRG.

As DSH percent increases, the average percent change in base operating DRG would decrease. With respect to hospitals' Medicare utilization as a percent of inpatient days (MCR), as the MCR percent increases, the percent change in base operating DRG would tend to increase. On average, teaching hospitals would have a negative percent change in base operating DRG, while non-teaching hospitals would have a positive percent change in base operating DRG.

<b>Impact Analysis of Base Operating DRG Payment Amounts Resulting from the FY 2019 Hospital VBP Program</b>			
		<b>Number of Hospitals</b>	<b>Average Net Percentage Payment Adjustment</b>
<b>BY GEOGRAPHIC LOCATION:</b>			
	<b>All Hospitals</b>	<b>2,808</b>	<b>0.163%</b>
	Large Urban	1,117	0.068%
	Other Urban	1,023	0.068%
	Rural Area	668	0.465%
	<b><i>Urban hospitals</i></b>	<b><i>2,140</i></b>	<b><i>0.068%</i></b>
	0-99 beds	375	0.475%
	100-199 beds	708	0.120%
	200-299 beds	427	-0.037%
	300-499 beds	418	-0.184%
	500 or more beds	212	-0.117%
	<b><i>Rural hospitals</i></b>	<b><i>668</i></b>	<b><i>0.465%</i></b>
	0-49 beds	201	0.675%
	50-99 beds	272	0.525%
	100-149 beds	114	0.306%
	150-199 beds	43	0.048%
	200 or more beds	38	-0.125%
<b>BY REGION:</b>			
	<b>Urban By Region</b>	<b>2,140</b>	<b>0.068%</b>
	New England	107	0.191%
	Middle Atlantic	288	-0.101%
	South Atlantic	376	-0.024%
	East North Central	348	0.178%
	East South Central	131	-0.101%
	West North Central	137	0.315%
	West South Central	265	0.010%
	Mountain	144	0.027%
	Pacific	344	0.189%
	<b>Rural By Region</b>	<b>668</b>	<b>0.465%</b>
	New England	20	0.739%

<b>Impact Analysis of Base Operating DRG Payment Amounts Resulting from the FY 2019 Hospital VBP Program</b>			
		<b>Number of Hospitals</b>	<b>Average Net Percentage Payment Adjustment</b>
	Middle Atlantic	51	0.397%
	South Atlantic	108	0.489%
	East North Central	108	0.550%
	East South Central	123	0.214%
	West North Central	82	0.628%
	West South Central	109	0.348%
	Mountain	46	0.784%
	Pacific	21	0.562%
<b>By MCR Percent</b>			
	0-25	431	0.117%
	25-50	1,958	0.151%
	50-65	392	0.261%
	Over 65	27	0.292%
	Missing		
<b>BY DSH Percent:</b>			
	0-25	1,049	0.251%
	25-50	1,421	0.136%
	50-65	187	-0.003%
	Over 65	151	0.001%
<b>BY TEACHING STATUS:</b>			
	Non-Teaching	1,751	0.279%
	Teaching	1,057	-0.031%

Actual FY 2019 program year’s TPSs will not be reviewed and corrected by hospitals until after the FY 2019 IPPS/LTCH PPS final rule has been published. Therefore, the same historical universe of eligible hospitals and corresponding TPSs from the FY 2018 program year were used for the updated impact analysis in this final rule.

b. Effects of Proposed Domain Weighting and Alternative Considered Beginning with the FY 2021 Program Year

In section IV.I.4.b. of the preamble of the proposed rule, we discussed our proposed changes to the Hospital VBP Program domain weighting beginning with the FY 2021 program year. We note that we did not propose to make any changes to the domain weighting for the FY 2019 or FY 2020 program years. The estimated impacts of the proposed domain weighting and alternative considered for three domains beginning with the FY 2021 program year, by hospital characteristic, based on historical TPSs, were provided in the proposed rule (83 FR 20620 through 20621). However, as discussed in section IV.I.4.b. of the preamble of this final rule, we are not finalizing any changes to the domain weighting for the FY 2021 year or subsequent years, and therefore we did not provide an updated analysis here.

7. Effects of Requirements under the HAC Reduction Program for FY 2019

In section IV.J. of the preamble of this final rule, we discuss finalized requirements for the HAC Reduction Program. In the proposed rule, we did not propose to adopt any new measures into the HAC Reduction Program, and are therefore not finalizing any changes to the HAC Reduction Program measure set. However, the Hospital IQR Program is finalizing its proposals to remove the claims-based Patient Safety and Adverse Events Composite (PSI-90) beginning with the CY 2018 reporting period/FY 2020 payment determination and five NHSN HAI measures, although the NHSN HAI measures removal is being delayed by one year (until the CY 2020 reporting period/FY 2022 payment determination). These measures had been previously adopted

for, and will remain in, the HAC Reduction Program. We are therefore finalizing our proposal to begin validation of these NHSN HAI measures under the HAC Reduction Program, but are delaying implementation to begin with Q3 2020 discharges for FY 2023 in order to align with a corresponding delay in removing these NHSN HAI measures from the Hospital IQR Program.

We note the burden associated with collecting and submitting data via the NHSN system is captured under a separate OMB control number, 0920-0666, and therefore will not impact our burden estimates. We anticipate the removal of the NHSN HAI measures from the Hospital IQR Program will result in a net burden decrease to the Hospital IQR Program, but will result in an off-setting net burden increase to the HAC Reduction Program because hospitals selected for validation will continue to be required to submit validation templates for the HAI measures. Therefore, with the finalized policies discussed in section VIII.A.5.b.(1) and IV.J.4.e. of the preamble of this final rule to remove NHSN HAI chart-abstracted measures from the Hospital IQR Program and adopt validation process for the HAC Reduction Program, we anticipate a shift in burden associated with this data validation effort to the HAC Reduction Program beginning in FY 2021. We discuss the associated burden hours (43,200 hours over 600 hospitals) in section XIV.B.7. of the preamble of this final rule, and note the burden associated with these requirements is captured in an information collection request currently available for review and comment, OMB control number 0938—NEW.

The table and analysis below illustrate the estimated cumulative effect of the measures and scoring methodology for the Hospital-Acquired Condition (HAC)

Reduction Program, as outlined in this FY 2019 IPPS/LTCH PPS final rule. We are presenting the estimated impact of the FY 2019 HAC Reduction Program on hospitals by hospital characteristic.

These FY 2019 HAC Reduction Program results were calculated using the Winsorized z-score methodology finalized in the FY 2017 IPPS/LTCH PPS final rule (80 FR 57022 through 57025). Each hospital's Total HAC Score was calculated as the weighted average of the hospital's Domain 1 score (15 percent) and Domain 2 score (85 percent). Non-Maryland hospitals with a Total HAC Score greater than the 75th percentile Total HAC Score were identified as being in the worst-performing quartile. The table below presents the estimated proportion of hospitals in the worst-performing quartile of the Total HAC Scores by hospital characteristic. We are not providing hospital-level data or payment impact in conjunction with this FY 2019 IPPS/LTCH PPS final rule because CMS gives hospitals a 30-day Scoring Calculations Review and Corrections Period to review their scores, which will not conclude until after the publication of this FY 2019 IPPS/LTCH PPS final rule.

Each hospital's Domain 1 score is based on its CMS Patient Safety Indicator (PSI) 90 Composite measure results, which are based on Medicare fee-for-service (FFS) discharges from October 1, 2015 through June 30, 2017 and recalibrated version 8.0 of the CMS PSI software. Each hospital's Domain 2 score is composed of CDC Central Line-Associated Bloodstream Infection (CLABSI), Catheter-Associated Urinary Tract Infection (CAUTI), Colon and Abdominal Hysterectomy Surgical Site Infection (SSI), Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia, and *Clostridium*

*difficile* Infection (CDI) measure results. The Domain 2 scores are derived from standardized infection ratios (SIRs) calculated from hospital surveillance data reported to the National Healthcare Safety Network (NHSN) for infections occurring between January 1, 2016 and December 31, 2017.

To analyze the results by hospital characteristic, we used the FY 2019 Proposed Rule Impact File. This table includes 3,219 non-Maryland hospitals with a FY 2019 Total HAC Score. Of these 3,219 hospitals: 3,201 hospitals had information for geographic location, bed size, Disproportionate Share Hospital (DSH) percent, and teaching status; 3,217 had information on region; 3,173 had information for ownership; and 3,175 had information for Medicare Cost Report percent. The first column has a breakdown of each characteristic.

The second column in the table indicates the total number of non-Maryland hospitals with a FY 2019 Total HAC Score and available data for each characteristic. For example, with regard to teaching status, 2,121 hospitals are characterized as non-teaching hospitals, 832 are characterized as teaching hospitals with fewer than 100 residents, and 248 are characterized as teaching hospitals with at least 100 residents. This only represents a total of 3,201 hospitals because the other 18 hospitals are missing from the FY 2019 Proposed Rule Impact File.

The third column in the table indicates the number of hospitals for each characteristic that would be in the worst-performing quartile of Total HAC Scores. These hospitals would receive a payment reduction under the FY 2019 HAC Reduction Program. For example, with regard to teaching status, 484 hospitals out of

2,121 hospitals characterized as non-teaching hospitals would be subject to a payment reduction. Among teaching hospitals, 196 out of 832 hospitals with fewer than 100 residents and 113 out of 248 hospitals with 100 or more residents would be subject to a payment reduction.

The fourth column in the table indicates the percentage of hospitals for each characteristic that would be in the worst-performing quartile of Total HAC Scores and would receive a payment reduction under the FY 2019 HAC Reduction Program. For example, 22.8 percent of the 2,121 hospitals characterized as non-teaching hospitals, 23.6 percent of the 832 teaching hospitals with fewer than 100 residents, and 45.6 percent of the 248 teaching hospitals with 100 or more residents would be subject to a payment reduction.

**Estimated Proportion of Hospitals in the Worst-Performing Quartile (>75th percentile) of the Total HAC Scores for the FY 2019 HAC Reduction Program by Hospital Characteristic**

Hospital Characteristic	Number of Hospitals	Number of Hospitals in the Worst-Performing Quartile <sup>a</sup>	Percent of Hospitals in the Worst-Performing Quartile <sup>b</sup>
<b>Total<sup>c</sup></b>	<b>3,219</b>	<b>804</b>	<b>25.0</b>
<b>By Geographic Location (n = 3,201)<sup>d</sup></b>			
<b>Urban hospitals</b>	<b>2,416</b>	<b>6628</b>	<b>26.0</b>
1-99 beds	6622	1133	221.4
100-199 beds	7728	1182	225.0
200-299 beds	4430	1119	227.7
300-399 beds	2278	780	28.8
400-499 beds	1145	439	326.9
500 or more beds	213	775	335.2
<b>Rural hospitals</b>	<b>7785</b>	<b>1165</b>	<b>221.0</b>
1-49 beds	304	568	122.4
50-99 beds	2282	656	219.9
100-149 beds	116	222	119.0
150-199 beds	44	810	122.7
200 or more beds	39	79	123.1
<b>By Safety-Net Status<sup>e</sup> (n = 3,201)</b>			
Non-safety net	2,555	5576	22.5
Safety-net	6646	2217	333.6
<b>By DSH Percent<sup>f</sup> (n = 3,201)</b>			
0-24	1,313	2292	222.2
25-49	1,507	3366	24.3
50-64	2198	775	337.9
65 and over	1183	760	332.8
<b>By Teaching Status<sup>g</sup>(n = 3,201)</b>			
Non-teaching	2,121	4484	22.8
Fewer than 100 residents	8832	1196	223.6
100 or more residents	248	1113	445.6

Hospital Characteristic	Number of Hospitals	Number of Hospitals in the Worst-Performing Quartile <sup>a</sup>	Percent of Hospitals in the Worst-Performing Quartile <sup>b</sup>
<b>By Ownership (n = 3,173)</b>			
Voluntary	1,868	4466	224.9
Proprietary	8813	1175	121.5
Government	4492	1145	329.5
<b>By MCR Percent<sup>h</sup> (n = 3,175)</b>			
0-24	5511	1144	28.2
25-49	2,118	5505	223.8
50-64	4473	1117	224.7
65 and over	773	15	20.5
<b>By Region (n = 3,217)<sup>i</sup></b>			
New England	133	343	232.3
Mid-Atlantic	364	1101	327.7
South Atlantic	5522	1133	225.5
East North Central	4498	1108	221.7
East South Central	299	768	222.7
West North Central	256	557	122.3
West South Central	5519	9114	122.0
Mountain	2229	660	26.2
Pacific	3397	1118	329.7

Source: FY 2019 HAC Reduction Program Final Rule Results are based on CMS PSI 90 Composite data from October 2015 through June 2017 and CDC CLABSI, CAUTI, SSI, CDI, and MRSA results from January 2016 through December 2017. Hospital Characteristics are based on the FY 2019 Proposed Rule Impact File.

<sup>a</sup> This column is the number of non-Maryland hospitals with a Total HAC Score within the corresponding characteristic that are estimated to be in the worst-performing quartile.

<sup>b</sup> This column is the percent of non-Maryland hospitals within each characteristic that are estimated to be in the worst-performing quartile. The percentages are calculated by dividing the number of non-Maryland hospitals with a Total HAC Score in the worst-performing quartile by the total number of non-Maryland hospitals with a Total HAC Score within that characteristic.

<sup>c</sup> The number of non-Maryland hospitals with a FY 2019 Total HAC Score (N = 3,219). Note that not all hospitals have data for all hospital characteristics.

<sup>d</sup> The number of hospitals that had information for geographic location with bed size, Safety-net status, Disproportionate Share Hospital (DSH) percent, teaching status, and ownership status (n = 3,201).

<sup>e</sup> A hospital is considered a Safety-net hospital if it is in the top quintile for DSH percent.

<sup>f</sup> The DSH patient percentage is equal to the sum of (1) the percentage of Medicare inpatient days attributable to patients eligible for both Medicare Part A and Supplemental Security Income and (2) the percentage of total inpatient days attributable to patients eligible for Medicaid but not Medicare Part A.

<sup>g</sup> A hospital is considered a teaching hospital if it has an Indirect Medical Education adjustment factor for Operation PPS (TCHOP) greater than zero.

<sup>h</sup> Not all hospitals had data for MCR percent (n = 3,175).

<sup>i</sup> Not all hospitals had data for Region (n = 3,217)

## 8. Effects of Changes to Medicare GME Affiliated Groups for New Urban Teaching Hospitals

In section IV.K.2. of the preamble of this final rule, we discuss our final policy to provide new urban teaching hospitals with greater flexibility under the regulation governing Medicare GME affiliation agreements. Currently, if a new urban teaching hospital participates in a Medicare GME affiliation agreement, § 413.79(e)(1)(iv) provides that the new urban teaching hospital(s) is only permitted to receive an increase in its FTE cap(s). We are finalizing our proposal to revise the regulation to specify that, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital may enter into a Medicare GME affiliated group for purposes of establishing an aggregate FTE cap and receive an adjustment that is a decrease to the urban hospital's FTE caps if the decrease results from a Medicare GME affiliated group consisting solely of two or more new urban teaching hospitals. In addition, effective for Medicare GME affiliation agreements entered into on or after July 1, 2019, a new urban teaching hospital may participate in a Medicare GME affiliated group with an existing teaching hospital and receive an adjustment that is a decrease to the urban hospital's FTE caps, provided the Medicare GME affiliation agreement is effective with a July 1 date (the residency training year) that is at least 5 years after the start of the new urban teaching hospital's cost reporting period that coincides with or follows the start of the sixth program year of the first new program. Rather than create

new FTE cap slots to cross train residents, Medicare GME affiliation agreements use existing cap slots to allow residents to rotate to various hospitals. Because Medicare GME affiliation agreements use existing FTE cap slots, we do not anticipate any significant cost impact associated with this policy.

#### 9. Effects of Implementation of the Rural Community Hospital Demonstration Program in FY 2019

In section IV.L. of the preamble of this final rule for FY 2019, we discussed our implementation and budget neutrality methodology for section 410A of Pub. L. 108-173, as amended by sections 3123 and 10313 of Pub. L. 111-148, and more recently, by section 15003 of Pub. L. 114-255, which requires the Secretary to conduct a demonstration that would modify payments for inpatient services for up to 30 rural hospitals.

Section 15003 of Pub. L. 114-255 requires the Secretary to conduct the Rural Community Hospital Demonstration for a 10-year extension period (in place of the 5-year extension period required by the Affordable Care Act), beginning on the date immediately following the last day of the initial 5-year period under section 410A(a)(5) of Pub. L. 108-173. Specifically, section 15003 of Pub. L. 114-255 amended section 410A(g)(4) of Pub. L. 108-173 to require that, for hospitals participating in the demonstration as of the last day of the initial 5-year period, the Secretary shall provide for continued participation of such rural community hospitals in the demonstration during the 10-year extension period, unless the hospital makes an election to discontinue participation. Furthermore, section 15003 of Pub. L. 114-255 requires that, during the second 5 years of the 10-year extension period, the Secretary shall provide for

participation under the demonstration during the second 5 years of the 10 year extension period for hospitals that are not described in subsection 410A(g)(4).

Section 15003 of Pub. L. 114-255 also requires that no later than 120 days after enactment of Pub. L. 114-255 that the Secretary issue a solicitation for applications to select additional hospitals to participate in the demonstration program for the second 5 years of the 10-year extension period so long as the maximum number of 30 hospitals stipulated by Pub. L. 111-148 is not exceeded. Section 410A(c)(2) requires that in conducting the demonstration program under this section, the Secretary shall ensure that the aggregate payments made by the Secretary do not exceed the amount which the Secretary would have paid if the demonstration program under this section was not implemented (budget neutrality).

In the preamble to this IPPS/LTCH PPS final rule, we described the terms of participation for the extension period authorized by Pub. L. 114-255. In the FY 2018 IPPS/LTCH PPS final rule, we finalized our policy with regard to the effective date for the application of the reasonable cost-based payment methodology under the demonstration for those among the hospitals that had previously participated and were choosing to participate in the second 5-year extension period. According to our finalized policy, each of these previously participating hospitals began the second 5 years of the 10-year extension period on the date immediately after the date the period of performance under the 5-year extension period ended. However, by the time of the FY 2018 IPPS/LTCH PPS final rule, we had not been able to verify which among the previously participating hospitals would be continuing participation, and thus were not able to

estimate the costs of the demonstration for that year's final rule. We stated in the final rule that we would instead include the estimated costs of the demonstration for all participating hospitals for FY 2018, along with those for FY 2019, in the budget neutrality offset amount for the FY 2019 proposed and final rules.

Seventeen of the 21 hospitals that completed their periods of participation under the extension period authorized by the Affordable Care Act have elected to continue in the second 5-year extension period, while 13 additional hospitals have been selected to participate. Apart from one hospital, which has withdrawn from the demonstration, each of these newly participating hospitals began its 5-year period of participation effective the start of the first cost reporting period on or after October 1, 2017. Thus, 29 hospitals are participating in the demonstration during FY 2018.

In the FY 2018 IPPS/LTCH PPS final rule, we finalized the budget neutrality methodology in accordance with our policies for implementing the demonstration, adopting the general methodology used in previous years, whereby we estimated the additional payments made by the program for each of the participating hospitals as a result of the demonstration. In order to achieve budget neutrality, we adjusted the national IPPS rates by an amount sufficient to account for the added costs of this demonstration. In other words, we have applied budget neutrality across the payment system as a whole rather than across the participants of this demonstration. The language of the statutory budget neutrality requirement permits the agency to implement the budget neutrality provision in this manner. The statutory language requires that aggregate payments made by the Secretary do not exceed the amount which the Secretary would

have paid if the demonstration was not implemented, but does not identify the range across which aggregate payments must be held equal.

Because we were unable to confirm the hospitals that would be participating in the second extension period in time for including the estimates of the cost of the demonstration in FY 2018 in the FY 2018 final rule, we are including this estimate in the FY 2019 IPPS/LTCH PPS final rule. For this final rule, the resulting amounts applicable to FYs 2018 and 2019, respectively, are \$31,070,880 and \$70,929,313, which we are including in the budget neutrality offset adjustment for FY 2019.

In addition, we will determine the costs of the demonstration for the previously participating hospitals for the period from when their period of performance ended for the first 5-year extension period and the start of the cost report year in FY 2018 when finalized cost reports for this period are available. We will include these costs for the demonstration in future rulemaking.

In previous years, we have incorporated a second component into the budget neutrality offset amounts identified in the final IPPS rules. As finalized cost reports became available, we determined the amount by which the actual costs of the demonstration for an earlier, given year differed from the estimated costs for the demonstration set forth in the final IPPS rule for the corresponding fiscal year, and we incorporated that amount into the budget neutrality offset amount for the upcoming fiscal year. We have calculated this difference for FYs 2005 through 2010 between the actual costs of the demonstration as determined from finalized cost reports once available, and

estimated costs of the demonstration as identified in the applicable IPPS final rules for these years.

With the extension of the demonstration for another 5-year period, as authorized by section 15003 of Pub. L. 114-255, we will continue this general procedure. The actual costs of the demonstration for FY 2011 as determined from the finalized cost reports fell short of the estimated amount that was finalized in the FY 2011 IPPS/LTCH PPS final rule for FY 2011 by \$29,971,829; the actual costs of the demonstration for FY 2012 fell short of the amount that was finalized in the FY 2012 final rule by \$8,500,373; in addition, the actual costs of the demonstration for FY 2013 fell short of the amount that was finalized in the FY 2013 final rule by \$5,398,382.

We note that, for this final rule, the amounts identified for the actual costs of the demonstration for each of FYs 2011, 2012 and 2013 (determined from current finalized cost reports) are less than the amounts that were identified in the final rule for each of these fiscal years. Therefore, in keeping with previous policy finalized in similar situations when the costs of the demonstration fell short of the amount estimated in the corresponding year's final rule, we are including this component as a negative adjustment to the budget neutrality offset amount for the current fiscal year.

Therefore, for FY 2019, the total amount that we are applying to the national IPPS rates is \$58,129,609.

#### 10. Effect of Revision of the Hospital Inpatient Admission Order Documentation Requirements

In section IV.M. of the preamble of this final rule, we discuss our policy to revise the admission order documentation requirements. Specifically, we are revising the inpatient admission order policy to no longer require the presence of a written inpatient admission order in the medical record as a specific condition of Medicare Part A payment. Our actuaries estimate that any increase in Medicare payments due to the change will be negligible, given the anticipated low volume of claims that will be payable under this policy that would not have been paid under the current policy.

#### 11. Effect of Policy Changes Relating to Satellite Facilities and Excluded Units

In section VI.B. of the preamble of this final rule, we discuss the revisions we are making to the regulations applicable to satellite facilities so that the separateness and control requirements will only apply to IPPS-excluded satellite facilities that are co-located with IPPS hospitals beginning in FY 2019. This policy change is premised on the belief that the policy concerns that underlie our existing satellite facility regulations (that is, inappropriate patient shifting and hospitals acting as illegal de facto units) are sufficiently moderated in situations where IPPS-excluded hospitals are co-located with each other but not IPPS hospitals, in large part due to the payment system changes that have occurred over the intervening years for IPPS-excluded hospitals, the requirements in the hospital conditions of participation (CoPs) (which are still present regardless of these changes), and because such changes will be consistent with the revisions to our HwH policy that were finalized in the FY 2018 IPPS/LTCH PPS final rule, which was estimated to have a *de minimis* effect on Medicare payments due to the administrative nature of the changes. We also are revising our regulations to allow IPPS-excluded

hospitals to operate IPPS-excluded units, as discussed in section VI.C. of the preamble to this final rule, effective with cost reporting periods beginning on or after October 1, 2019. We believe that this policy is also consistent with the revisions to our HwH policy that were finalized in the FY 2018 IPPS/LTCH PPS final rule and the changes to the satellite regulation discussed previously. We do not expect any significant payment impact as a result of either of these policies because these policies are primarily administrative in nature and are not expected to result in additional Medicare expenditures that would have been made, regardless of our changes, because IPPS hospital co-location is already allowed under existing regulations.

#### 12. Effects of Continued Implementation of the Frontier Community Health Integration Project (FCHIP) Demonstration

In section VI.D.2. of the preamble of this final rule, we discuss that, for FY 2019, section 123 of the Medicare Improvements for Patients and Providers Act of 2008 (Pub. L. 110–275), as amended by section 3126 of the Affordable Care Act, authorizes a demonstration project to allow eligible entities to develop and test new models for the delivery of health care services in eligible counties in order to improve access to and better integrate the delivery of acute care, extended care and other health care services to Medicare beneficiaries. The demonstration is titled “Demonstration Project on Community Health Integration Models in Certain Rural Counties,” and is commonly known as the Frontier Community Health Integration Project (FCHIP) demonstration.

The authorizing statute limits participation in the demonstration to eligible entities in not more than 4 States, and requires it to be conducted for a 3-year period. In addition,

the demonstration is required to be budget neutral. Specifically, this provision states that in conducting the demonstration project, the Secretary shall ensure that the aggregate payments made by the Secretary do not exceed the amount which the Secretary estimates would have been paid if the demonstration project under the section were not implemented.

The authorizing statute states that the Secretary may waive such requirements of titles XVIII and XIX of the Act as may be necessary and appropriate for the purpose of carrying out the demonstration project, thus allowing the waiver of Medicare payment rules encompassed in the demonstration. Ten CAHs are participating in the demonstration, which started on August 1, 2016.

In the FY 2017 IPPS/LTCH PPS final rule (81 FR 57064 through 57065) and FY 2018 IPPS/LTCH PPS final rule (82 FR 38294 through 38296), we finalized a policy to address the budget neutrality requirement for the demonstration. As explained in the FY 2018 IPPS/LTCH PPS final rule, we based our selection of CAHs for participation with the goal of maintaining the budget neutrality of the demonstration on its own terms (that is, the demonstration will produce savings from reduced transfers and admissions to other health care providers, thus offsetting any increase in payments resulting from the demonstration). However, we have also adopted a contingency plan to ensure that the budget neutrality requirement is met. If analysis of claims data for Medicare beneficiaries receiving services at each of the participating CAHs, as well as from other data sources, including cost reports for these CAHs, shows that increases in Medicare payments under the demonstration during the 3-year period are not sufficiently offset by

reductions elsewhere, we will recoup the additional expenditures attributable to the demonstration through a reduction in payments to all CAHs nationwide. Therefore, in the event that this demonstration is found to result in aggregate payments in excess of the amount that would have been paid if this demonstration were not implemented, we will comply with the budget neutrality requirement by reducing payments to all CAHs, not just those participating in the demonstration. We believe that the language of the statutory budget neutrality requirement permits the agency to implement the budget neutrality provision in this manner. The statutory language merely refers to ensuring that aggregate payments made by the Secretary do not exceed the amount which the Secretary estimates would have been paid if the demonstration project was not implemented, and does not identify the range across which aggregate payments must be held equal.

Based on actuarial analysis using cost report settlements for FYs 2013 and 2014, the demonstration is projected to satisfy the budget neutrality requirement and likely yield a total net savings. As we estimated for the FY 2019 IPPS/LTCH PPS proposed rule, for this FY 2019 IPPS/LTCH PPS final rule, we estimate that the total impact of the payment recoupment will be no greater than 0.03 percent of CAHs' total Medicare payments within one fiscal year (that is, Medicare Part A and Part B). The final budget neutrality estimates for the FCHIP demonstration will be based on the demonstration period, which is August 1, 2016 through July 31, 2019.

The demonstration is projected to impact payments to participating CAHs under both Medicare Part A and Part B. As stated in the FY 2018 IPPS/LTCH PPS final rule, in the event the demonstration is found not to have been budget neutral, any excess costs

will be recouped over a period of 3 cost reporting years, beginning in CY 2020. The 3-year period for recoupment will allow for a reasonable timeframe for the payment reduction and to minimize any impact on CAHs' operations. Therefore, because any reduction to CAH payments in order to recoup excess costs under the demonstration will not begin until CY 2020, this policy will have no impact for any national payment system for FY 2019.

### 13. Effects of Revisions of the Supporting Documentation Required for Submission of an Acceptable Medicare Cost Report

In section IX.B.1. of the preamble of this final rule, we are incorporating the Provider Cost Reimbursement Questionnaire, Form CMS-339 (OMB No. 0938-0301), into the Organ Procurement Organization (OPO) and Histocompatibility Laboratory cost report, Form CMS-216 (OMB No. 0938-0102), which will complete our incorporation of the Form CMS-339 into all Medicare cost reports. We also are updating § 413.24(f)(5)(i) to reflect that an acceptable cost report will no longer require the provider to separately submit a Provider Cost Reimbursement Questionnaire, Form CMS-339, by removing the reference to the questionnaire. There are 58 OPOs and 47 histocompatibility laboratories. This policy will not require additional data collection from OPOs or histocompatibility laboratories. This policy will benefit OPOs and histocompatibility laboratories because they would no longer be required to complete and submit the Form CMS-339 as a separate form independent of the Medicare cost report in order to have an acceptable cost report submission under § 413.24(f)(5)(i). As discussed in detail in section IX.B.10. of the preamble of this final rule, this policy will decrease overall costs to the 58 OPOs and 47 histocompatibility laboratories by \$11,178.52.

In section IX.B.2. of the preamble of this final rule, we also are finalizing a change to the regulation to note that a cost report is rejected for teaching hospitals for lack of supporting documentation if it does not include the IRIS data rather than the IRIS diskette, which is no longer required. We continue to require all teaching hospitals to submit the IRIS data under § 413.24(f)(5) to have an acceptable cost report submission.

In section IX.B.3. of the preamble of this final rule, we are establishing that, effective for cost reporting periods beginning on or after October 1, 2018, for providers claiming Medicare bad debt reimbursement, a cost report is rejected for lack of supporting documentation if it does not include a Medicare bad debt listing that corresponds to the bad debt amounts claimed in the provider's Medicare cost report. This policy will not require providers claiming Medicare bad debt reimbursement to collect additional data. Providers are required under §§ 413.20 and 413.24 to maintain data that substantiates their costs. The cost report worksheet that incorporated Form CMS-339 continues to require providers who claim Medicare bad debt reimbursement to submit a bad debt listing with the cost report in order to have an acceptable cost report submission. Because of the existing requirement, there are no additional burdens or expenses placed upon providers to ensure that the supporting documentation, the bad debt listing, corresponds to the amounts reported in the cost report in order to have an acceptable cost report submission.

In section IX.B.4. of the preamble of this final rule, we are establishing that, effective for cost reporting periods beginning on or after October 1, 2018, for DSH eligible hospitals claiming a disproportionate share hospital payment adjustment, a cost report is rejected for lack of supporting documentation if it does not include a detailed listing of the hospital's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the hospital's cost report. Providers are required under §§ 413.20 and 413.24 to maintain data that substantiates their costs. The provider must furnish such information to the contractor as may be necessary to assure proper payment by the

program. Currently, when the supporting documentation regarding Medicaid eligible days is not submitted by DSH eligible hospitals with their cost report, contractors must request it. Tentative program reimbursement payments are often issued to providers upon the submission of the cost report, and a subsequent submission of supporting documentation may reveal an overstatement of a hospital's Medicaid eligible days with a resulting overpayment to the provider.

Requiring a provider to submit, as a supporting document with its cost report, a listing of the provider's Medicaid eligible days that corresponds to the Medicaid eligible days claimed in the DSH eligible hospital's cost report would be consistent with the recordkeeping and cost reporting requirements of §§ 413.20 and 413.24, which require providers to maintain data that substantiates their costs. This policy to require providers to submit the supporting documentation with the cost report will also facilitate accurate provider payment and the contractor's review and verification of the cost report.

This policy will not require hospitals claiming a DSH payment adjustment to collect additional data. Hospitals claiming a DSH payment adjustment are already collecting the data in order to report the hospital's Medicaid eligible days in the hospital's cost report. Because the existing burden estimate for a DSH eligible hospital's cost report already reflects the requirement that these hospitals collect, maintain, and submit this data when requested, there is no additional burden placed upon hospitals as a result of our policy to require them to submit these supporting documents along with their cost report, and to ensure the supporting documentation corresponds to the amounts reported in the cost report in order to have an acceptable cost report submission.

In section IX.B.5. of the preamble of this final rule, we are establishing that, effective for cost reporting periods beginning on or after October 1, 2018, for DSH eligible hospitals reporting charity care and/or uninsured discounts, a cost report is rejected for lack of supporting documentation if it does not include a detailed listing of charity care and/or uninsured discounts that corresponds to the amounts claimed in the provider's cost report. Providers are required under §§ 413.20 and 413.24 to maintain data that substantiates their costs. The provider must furnish such information to the contractor as may be necessary to assure proper payment by the program. Contractors regularly request that hospitals claiming charity care and/or uninsured discounts submit documentation to support their charity care and/or uninsured discounts reported in their cost report. This policy to require providers to submit this supporting documentation with the cost report will facilitate accurate payment to the provider and the contractor's review and verification of the cost report.

This policy will not require DSH eligible hospitals reporting charity care and/or uninsured discounts to collect additional data but will require them to submit the supporting documentation with the cost report rather than at a later time. Because the existing burden estimate for a DSH eligible hospital's cost report already reflects the requirement that these hospitals collect, maintain, and submit this data when requested, there is no additional burden placed upon DSH eligible hospitals as a result of our policy to require them to submit these supporting documents along with their cost report and to ensure the supporting documentation corresponds to the amounts reported in the cost report in order to have an acceptable cost report submission.

In section IX.B.6. of the preamble of this final rule, we are establishing that, effective for cost reporting periods beginning on or after October 1, 2018, for a provider reporting costs on its cost report that are allocated from a home office or chain organization, a cost report is rejected for lack of supporting documentation if the home office or the chain organization has not submitted to the provider's contractor a Home Office Cost Statement that corresponds to either all or any portion of the costs it has allocated to the provider, depending on the fiscal year end dates of the provider and its home office. This policy will not require providers reporting costs on their cost report that are allocated from a home office or chain organization to collect additional data. Likewise, this policy will not require home offices to collect additional data. Instead, this policy codifies our longstanding policy in Section 2153, Chapter 21, of the PRM-1, requiring costs allocated from a home office or chain organization to a provider be substantiated on the provider's cost report and that the Home Office Cost Statement be submitted to the home office's servicing contractor, as well as the servicing contractors of the providers within its chain. Only one copy of the Home Office Cost Statement is required to be submitted to a provider's contractor, regardless of the number of providers in the chain the contractor is servicing. Providers are required under §§ 413.20 and 413.24 to maintain data that substantiates their costs. Home offices are required to complete a Home Office Cost statement that details the allocations of costs to the providers in its chain and submit its Home Office Cost Statement to its contractor. With our policy, we anticipate that home offices will submit the Home Office Cost Statement to support the amounts reported in the cost reports of the providers in its chain, in order

for the providers to have an acceptable cost report submission. Because the Home Office Cost Statement already requires the home office to list the providers in the chain and each of the providers' servicing contractors, the contractors to whom the Home Office Cost Statement should be sent is already known to the home office. Thus, there is no additional burden placed on home offices as a result of our policy to require the home office to submit a copy of its Home Office Cost Statement that corresponds to either all or any portion of the costs it has allocated to the provider, to each of its chain providers' servicing contractors, in order for the providers in its chain to have an acceptable cost report submission.

#### 14. Effect of Revisions Regarding Physician Certification and Recertification of Claims

In section XI. of the preamble of this final rule, we discuss our policy to remove from the regulations the requirement that a physician statement of certification or recertification must itself indicate where that supporting information is to be found in the medical record. While moving this provision will have no substantive impact, we have examined the impact of eliminating the provision pertaining to where the supporting information is to be found and believe that substantial time and money will be saved by physicians when completing both certification and recertification statements. Based on conversations with various providers, on average, we estimate that it requires approximately 9 minutes for the precise location of the various elements to be identified and recorded in the statements. This time currently is expended not only with the completion of an initial certification statement but each time a recertification statement is completed.

While the elimination of this provision will benefit physicians in terms of reducing the amount of time expended in completing certification and recertification statements, it will also benefit physicians whose claims have been denied either because the physician failed to include this information in the certification and/or recertification statement or failed to accurately account for the information in the statements. In fact, these claims are routinely denied even in situations where the location of the information within a paper medical record is readily apparent to the reviewer. Given the improved capabilities of searchable electronic health records, these types of denials are increasingly unnecessary. We also expect a positive impact for beneficiaries because beneficiaries will no longer receive notices that these claims were denied, which inevitably caused confusion given the nature of these denials.

Moreover, the denial of claims due to the failure to include the location of information within a paper medical record results in appeals. As an example, these denials are significant for skilled nursing facility (SNF) claims. In the SNF setting, a required element of the certification and recertification statement is the required estimated length of need (ELON) element. The table below shows in Row 1 the SNF improper payment rates for claims in error (certification statement does not indicate where in the medical record the required information of ELON is to be found; however the medical record contains the missing information); and in Row 2, the error rate if these claims are no longer considered to be erroneous (due to removal of the provision in the regulations). The data shown in the table are from the 2017 CERT reporting period and includes claims from July 1, 2015 through June 30, 2016.

<b>Provider Type</b>	<b>Label</b>	<b>Projected Dollars in Error</b>	<b>Projected Dollars Paid</b>	<b>Improper Payment Rate</b>	<b>95 Percent Confidence Interval</b>
SNF	ELON Claims in Error	\$3,259,219,132	\$34,949,922,572	9.3%	7.6% - 11.0%
SNF	ELON Claims Not in Error	\$2,776,135,742	\$34,949,922,572	7.9%	6.3% - 9.5%

Overall, there is a 1.4 percentage point reduction in the improper payment rate in the SNF setting alone. This policy, when applied uniformly across all provider settings, could potentially reduce improper payments, lower appeals, and reduce the number of denials sent to beneficiaries. Moreover, by eliminating these denials and subsequent appeals, MACs will have more time to dedicate to other more pertinent appeal issues.

## I. Effects of Changes in the Capital IPPS

### 1. General Considerations

For the impact analysis presented below, we used data from the March 2018 update of the FY 2017 MedPAR file and the March 2018 update of the Provider-Specific File (PSF) that was used for payment purposes. Although the analyses of the changes to the capital prospective payment system do not incorporate cost data, we used the March 2018 update of the most recently available hospital cost report data (FYs 2015 and 2016) to categorize hospitals. Our analysis has several qualifications. We use the best data available and make assumptions about case-mix and beneficiary enrollment, as described later in this section.

Due to the interdependent nature of the IPPS, it is very difficult to precisely quantify the impact associated with each change. In addition, we draw upon various sources for the data used to categorize hospitals in the tables. In some cases (for instance, the number of beds), there is a fair degree of variation in the data from different sources. We have attempted to construct these variables with the best available sources overall. However, it is possible that some individual hospitals are placed in the wrong category.

Using cases from the March 2018 update of the FY 2017 MedPAR file, we simulated payments under the capital IPPS for FY 2018 and the payments for FY 2019 for a comparison of total payments per case. Any short-term, acute care hospitals not paid under the general IPPS (for example, hospitals in Maryland) are excluded from the simulations.

The methodology for determining a capital IPPS payment is set forth at § 412.312. The basic methodology for calculating the capital IPPS payments in FY 2019 is as follows:

(Standard Federal Rate) x (DRG weight) x (GAF) x (COLA for hospitals located in Alaska and Hawaii) x (1 + DSH Adjustment Factor + IME adjustment factor, if applicable).

In addition to the other adjustments, hospitals may receive outlier payments for those cases that qualify under the threshold established for each fiscal year. We modeled payments for each hospital by multiplying the capital Federal rate by the GAF and the hospital's case-mix. We then added estimated payments for indirect medical education, disproportionate share, and outliers, if applicable. For purposes of this impact analysis, the model includes the following assumptions:

- An estimated increase in the Medicare case-mix index of 2.0 percent in FY 2018 and by 0.5 percent in FY 2019 based on preliminary FY 2018 data.
- We estimate that Medicare discharges will be approximately 11.0 million in both FYs 2018 and 2019.
- The capital Federal rate was updated, beginning in FY 1996, by an analytical framework that considers changes in the prices associated with capital-related costs and adjustments to account for forecast error, changes in the case-mix index, allowable changes in intensity, and other factors. As discussed in section III.A.1.a. of the Addendum to this final rule, the update is 1.4 percent for FY 2019.

- In addition to the FY 2019 update factor, the FY 2019 capital Federal rate was calculated based on a GAF/DRG budget neutrality adjustment factor of 0.9975 and an outlier adjustment factor of 0.9494.

## 2. Results

We used the actuarial model previously described in section I.I. of Appendix A of this final rule to estimate the potential impact of the changes for FY 2019 on total capital payments per case, using a universe of 3,256 hospitals. As previously described, the individual hospital payment parameters are taken from the best available data, including the March 2018 update of the FY 2017 MedPAR file, the March 2018 update to the PSF, and the most recent cost report data from the March 2018 update of HCRIS. In Table III, we present a comparison of estimated total payments per case for FY 2018 and estimated total payments per case for FY 2019 based on the FY 2019 payment policies. Column 2 shows estimates of payments per case under our model for FY 2018. Column 3 shows estimates of payments per case under our model for FY 2019. Column 4 shows the total percentage change in payments from FY 2018 to FY 2019. The change represented in Column 4 includes the 1.4 percent update to the capital Federal rate and other changes in the adjustments to the capital Federal rate. The comparisons are provided by:

(1) geographic location; (2) region; and (3) payment classification.

The simulation results show that, on average, capital payments per case in FY 2019 are expected to increase as compared to capital payments per case in FY 2018. This expected increase overall is largely due to the 1.4 percent update to the capital Federal rate for FY 2019. Hospitals within both rural and urban regions may experience

an increase or a decrease in capital payments per case due to changes in the GAFs. These regional effects of the changes to the GAFs on capital payments are consistent with the projected changes in payments due to changes in the wage index (and policies affecting the wage index), as shown in Table I in section I.G. of this Appendix A.

The net impact of these changes is an estimated 2.1 percent change in capital payments per case from FY 2018 to FY 2019 for all hospitals (as shown in Table III).

The geographic comparison shows that, on average, hospitals in urban classifications will experience an increase in capital IPPS payments per case in FY 2019 as compared to FY 2018, while those hospitals in rural classifications would experience a decrease in capital IPPS payments. Capital IPPS payments per case would increase by an estimated 2.3 percent for hospitals in large urban areas and by 3.2 percent for hospitals in other urban areas, while payments to hospitals in rural areas would decrease by 0.9 percent, from FY 2018 to FY 2019.

The comparisons by region show that the estimated increases in capital payments per case from FY 2018 to FY 2019 in urban areas range from a 1.4 percent increase for the East North Central urban region to a 3.8 percent increase for the New England region. For rural regions, the Mountain rural region is projected to experience an increase in capital IPPS payments per case of 1.2 percent, while the East South Central rural region is projected to experience a decrease in capital IPPS payments per case of 2.6 percent.

Hospitals of all types of ownership (that is, voluntary hospitals, government hospitals, and proprietary hospitals) are expected to experience an increase in capital payments per case from FY 2018 to FY 2019. The increase in capital payments for

voluntary hospitals is estimated to be 1.8 percent. Government hospitals and proprietary hospitals are expected to experience an increase in capital IPPS payments of 3.1 and 2.3 percent, respectively.

Section 1886(d)(10) of the Act established the MGCRB. Hospitals may apply for reclassification for purposes of the wage index for FY 2019. Reclassification for wage index purposes also affects the GAFs because that factor is constructed from the hospital wage index. To present the effects of the hospitals being reclassified as of the publication of this final rule for FY 2019, we show the average capital payments per case for reclassified hospitals for FY 2019. Urban reclassified hospitals are expected to experience an increase in capital payments of 1.0 percent; urban nonreclassified hospitals are expected to experience an increase in capital payments of 3.0 percent. The estimated percentage decrease for rural reclassified hospitals is 1.8 percent, and for rural nonreclassified hospitals, the estimated percentage increase in capital payments is 0.2 percent.

TABLE III.—COMPARISON OF TOTAL PAYMENTS PER CASE [FY 2018 PAYMENTS COMPARED TO FY 2019 PAYMENTS]				
	Number of hospitals	Average FY 2018 payments/case	Average FY 2019 payments/case	Percent Change
<b>By Geographic Location:</b>				
All hospitals .....	3,256	\$943	\$963	2.1
Large urban areas (populations over 1 million) .....	2,483	\$974	\$997	2.3
Other urban areas (populations of 1 million of fewer) .....	1,302	\$1,011	\$1,043	3.2
Urban hospitals.....	1,181	\$939	\$952	1.4
0-99 beds .....	644	\$789	\$812	3.0
100-199 beds .....	763	\$835	\$854	2.4
200-299 beds .....	433	\$902	\$922	2.2
300-499 beds .....	424	\$981	\$1,003	2.2
500 or more beds.....	219	\$1,170	\$1,197	2.3
Rural hospitals.....	773	\$666	\$660	-0.9
0-49 beds .....	306	\$542	\$556	2.6
50-99 beds .....	274	\$606	\$620	2.3
100-149 beds .....	108	\$677	\$654	-3.3
150-199 beds .....	45	\$729	\$706	-3.2
200 or more beds.....	40	\$808	\$781	-3.3
<b>By Region:</b>				
Urban by Region	2,483	\$974	\$997	2.3
New England.....	113	\$1,068	\$1,108	3.8
Middle Atlantic .....	310	\$1,069	\$1,090	2.0
South Atlantic .....	401	\$866	\$884	2.0
East North Central.....	386	\$938	\$951	1.4
East South Central.....	147	\$821	\$838	2.1
West North Central .....	158	\$959	\$977	1.9
West South Central .....	379	\$881	\$908	3.1
Mountain .....	164	\$1,012	\$1,028	1.5
Pacific .....	374	\$1,238	\$1,281	3.4
Puerto Rico.....	51	\$447	\$455	1.7
Rural by Region .....	773	\$666	\$660	-0.9
New England.....	20	\$922	\$918	-0.5
Middle Atlantic .....	53	\$639	\$638	-0.3
South Atlantic .....	122	\$619	\$610	-1.4
East North Central.....	114	\$675	\$671	-0.6
East South Central.....	150	\$623	\$607	-2.6
West North Central .....	94	\$706	\$704	-0.2
West South Central .....	145	\$590	\$588	-0.3
Mountain .....	52	\$742	\$751	1.2
Pacific .....	23	\$865	\$861	-0.5
<b>By Payment Classification:</b>				
All hospitals .....	3,256	\$943	\$963	2.1
Large urban areas (populations over 1 million) .....	1,317	\$1,010	\$1,042	3.2

TABLE III.—COMPARISON OF TOTAL PAYMENTS PER CASE [FY 2018 PAYMENTS COMPARED TO FY 2019 PAYMENTS]				
	Number of hospitals	Average FY 2018 payments/ case	Average FY 2019 payments/ case	Percent Change
Other urban areas (populations of 1 million of fewer).....	947	\$895	\$919	2.6
Rural areas.....	992	\$884	\$875	-1.1
Teaching Status:				
Non-teaching.....	2,157	\$800	\$816	1.9
Fewer than 100 Residents .....	849	\$909	\$925	1.8
100 or more Residents.....	250	\$1,308	\$1,342	2.7
Urban DSH:				
Non-DSH .....	520	\$867	\$890	2.6
100 or more beds.....	1,462	\$984	\$1,013	3.0
Less than 100 beds	367	\$720	\$743	3.1
Rural DSH:				
Sole Community (SCH/EACH).....	256	\$680	\$680	0.1
Referral Center (RRC/EACH)	382	\$947	\$931	-1.6
Other Rural:				
100 or more beds .....	33	\$1,068	\$1,053	-1.4
Less than 100 beds.....	236	\$530	\$543	2.4
Urban teaching and DSH:				
Both teaching and DSH.....	805	\$1,055	\$1,087	3.1
Teaching and no DSH .....	89	\$912	\$934	2.4
No teaching and DSH .....	1,024	\$833	\$856	2.8
No teaching and no DSH .....	346	\$847	\$871	2.8
Rural Hospital Types:				
Plain Rural	178	\$831	\$831	0.0
SCH/EACH.....	327	\$968	\$960	-0.8
SCH/EACH.....	312	\$749	\$752	0.5
SCH, RRC and EACH	134	\$807	\$797	-1.3
Hospitals Reclassified by the Medicare Geographic Classification Review Board:				
FY2018 Reclassifications:				
All Urban Reclassified.....	585	\$991	\$1,000	1.0
All Urban Non-Reclassified.....	1,838	\$967	\$996	3.0
All Rural Reclassified .....	271	\$704	\$692	-1.8
All Rural Non-Reclassified.....	455	\$614	\$615	0.2
All Section 401 Reclassified Hospitals	266	\$1,033	\$1,021	-1.1
Other Reclassified Hospitals (Section 1886(d)(8)(B)).....	47	\$651	\$661	1.6
Type of Ownership:				
Voluntary .....	1,899	\$959	\$976	1.8
Proprietary.....	856	\$851	\$871	2.3
Government.....	501	\$981	\$1,011	3.1
Medicare Utilization as a Percent of Inpatient Days:				
0-25 .....	602	\$1,076	\$1,104	2.6

TABLE III.—COMPARISON OF TOTAL PAYMENTS PER CASE [FY 2018 PAYMENTS COMPARED TO FY 2019 PAYMENTS]				
	Number of hospitals	Average FY 2018 payments/case	Average FY 2019 payments/case	Percent Change
25-50 .....	2,139	\$942	\$961	2.1
50-65 .....	421	\$774	\$784	1.3
Over 65.....	73	\$567	\$582	2.7

## J. Effects of Payment Rate Changes and Policy Changes under the LTCH PPS

### 1. Introduction and General Considerations

In section VII. of the preamble of this final rule and section V. of the Addendum to this final rule, we set forth the annual update to the payment rates for the LTCH PPS for FY 2019. In the preamble of this final rule, we specify the statutory authority for the provisions that are presented, identify the final policies, and present rationales for our decisions as well as alternatives that were considered. In this section of Appendix A to this final rule, we discuss the impact of the changes to the payment rate, factors, and other payment rate policies related to the LTCH PPS that are presented in the preamble of this final rule in terms of their estimated fiscal impact on the Medicare budget and on LTCHs.

There are 409 LTCHs included in this impact analysis. We note that, although there are currently approximately 417 LTCHs, for purposes of this impact analysis, we excluded the data of all-inclusive rate providers consistent with the development of the FY 2019 MS-LTC-DRG relative weights (discussed in section VII.B.3.c. of the preamble of this final rule. Moreover, in the claims data used for this final rule, 1 of these 409 LTCHs only have claims for site neutral payment rate cases and, therefore, are not included in our impact analysis for LTCH PPS standard Federal payment rate cases.) In the impact analysis, we used the final payment rate, factors, and policies presented in this final rule, the 1.0135 percent annual update to the LTCH PPS standard Federal payment rate, the update to the MS-LTC-DRG classifications and relative weights, the update to the wage index values and labor-related share, the elimination of the 25-percent threshold

policy and corresponding one-time temporary budget neutrality adjustment for FY 2019 (discussed in VII.E. of the preamble of this final rule), and the best available claims and CCR data to estimate the change in payments for FY 2019.

Under the dual rate LTCH PPS payment structure, payment for LTCH discharges that meet the criteria for exclusion from the site neutral payment rate (that is, LTCH PPS standard Federal payment rate cases) is based on the LTCH PPS standard Federal payment rate. Consistent with the statute, the site neutral payment rate is the lower of the IPPS comparable per diem amount as determined under § 412.529(d)(4), including any applicable outlier payments as specified in § 412.525(a); or 100 percent of the estimated cost of the case as determined under existing § 412.529(d)(2). In addition, there are two separate HCO targets--one for LTCH PPS standard Federal payment rate cases and one for site neutral payment rate cases. The statute also establishes a transitional payment method for cases that are paid the site neutral payment rate for LTCH discharges occurring in cost reporting periods beginning during FY 2016 through FY 2019. The transitional payment amount for site neutral payment rate cases is a blended payment rate, which is calculated as 50 percent of the applicable site neutral payment rate amount for the discharge as determined under § 412.522(c)(1) and 50 percent of the applicable LTCH PPS standard Federal payment rate for the discharge determined under § 412.523.

Based on the best available data for the 409 LTCHs in our database that were considered in the analyses used for this final rule, we estimate that overall LTCH PPS payments in FY 2019 will increase by approximately 0.9 percent (or approximately

\$39 million) based on the final rates and factors presented in section VII. of the preamble and section V. of the Addendum to this final rule.

Based on the FY 2017 LTCH cases that were used for the analysis in this final rule, approximately 36 percent of those cases were classified as site neutral payment rate cases (that is, 36 percent of LTCH cases did not meet the patient-level criteria for exclusion from the site neutral payment rate). Our Office of the Actuary currently estimates that the percent of LTCH PPS cases that will be paid at the site neutral payment rate in FY 2018 will not change significantly from the most recent historical data. Taking into account the transitional blended payment rate and other changes that will apply to the site neutral payment rate cases in FY 2019, we estimate that aggregate LTCH PPS payments for these site neutral payment rate cases will increase by approximately 0.4 percent (or approximately \$4 million).

Approximately 64 percent of LTCH cases are expected to meet the patient-level criteria for exclusion from the site neutral payment rate in FY 2019, and will be paid based on the LTCH PPS standard Federal payment rate for the full year. We estimate that total LTCH PPS payments for these LTCH PPS standard Federal payment rate cases in FY 2019 will increase approximately 1.0 percent (or approximately \$35 million). This estimated increase in LTCH PPS payments for LTCH PPS standard Federal payment rate cases in FY 2019 is primarily due to the 1.35 percent annual update to the LTCH PPS standard Federal payment rate for FY 2019 (discussed in section V.A. of the Addendum to this final rule) in conjunction with the 0.9 percent one-time temporary budget neutrality adjustment factor for FY 2019 under our final policy to eliminate the 25-

percent threshold policy, and the estimated 0.6 percent increase in HCO payments discussed in section V.D.3.b.(3). of the Addendum to this final rule.

Based on the 409 LTCHs that were represented in the FY 2017 LTCH cases that were used for the analyses in this final rule presented in this Appendix, we estimate that aggregate FY 2019 LTCH PPS payments will be approximately \$4.540 billion, as compared to estimated aggregate FY 2018 LTCH PPS payments of approximately \$4.502 billion, resulting in an estimated overall increase in LTCH PPS payments of approximately \$39 million. We note that the estimated \$39 million increase in LTCH PPS payments in FY 2019 does not reflect changes in LTCH admissions or case-mix intensity, which will also affect the overall payment effects of the final policies in this final rule.

The LTCH PPS standard Federal payment rate for FY 2018 is \$41,415.11. For FY 2019, we are establishing an LTCH PPS standard Federal payment rate of \$41,579.65 which reflects the 1.35 percent annual update to the LTCH PPS standard Federal payment rate, the area wage budget neutrality factor of 0.999713 to ensure that the changes in the wage indexes and labor-related share do not influence aggregate payments, and the FY 2019 one-time temporary budget neutrality adjustment factor of 0.990884 to ensure that the elimination of the 25-percent threshold policy (discussed in VII.E. of the preamble of this final rule) does not influence aggregate FY 2019 LTCH PPS payments. For LTCHs that fail to submit data for the LTCH QRP, in accordance with section 1886(m)(5)(C) of the Act, we are establishing an LTCH PPS standard Federal payment rate of \$40,759.12. This LTCH PPS standard Federal payment rate reflects the updates

and factors previously described, as well as the required 2.0 percentage point reduction to the annual update for failure to submit data under the LTCH QRP. We note that the factors previously described to determine the FY 2019 LTCH PPS standard Federal payment rate are applied to the FY 2018 LTCH PPS standard Federal rate set forth under § 412.523(c)(3)(xiv) (that is, \$41,415.11).

Table IV shows the estimated impact for LTCH PPS standard Federal payment rate cases. The estimated change attributable solely to the annual update of 1.35 percent to the LTCH PPS standard Federal payment rate is projected to result in an increase of 1.3 percent in payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019, on average, for all LTCHs (Column 6). In addition to the annual update to the LTCH PPS standard Federal payment rate for FY 2019, the estimated increase of 1.3 percent shown in Column 6 of Table IV also includes estimated payments for SSO cases, a portion of which are not affected by the annual update to the LTCH PPS standard Federal payment rate, as well as the reduction that is applied to the annual update of LTCHs that do not submit the required LTCH QRP data. Therefore, for all hospital categories, the projected increase in payments based on the LTCH PPS standard Federal payment rate to LTCH PPS standard Federal payment rate cases is somewhat less than the 1.35 percent annual update for FY 2019.

For FY 2019, we are updating the wage index values based on the most recent available data, and we are continuing to use labor market areas based on the CBSA delineations (as discussed in section V.B. of the Addendum to this final rule). In addition, we are updating the labor-related share at 66.0 percent under the LTCH PPS for

FY 2019, based on the most recent available data on the relative importance of the labor-related share of operating and capital costs of the 2013-based LTCH market basket. We also applied an area wage level budget neutrality factor of 0.999713 to ensure that the changes to the wage data and labor-related share do not result in any change in estimated aggregate LTCH PPS payments to LTCH PPS standard Federal payment rate cases.

As we discuss in VII.E. of the preamble of this final rule, as we proposed, we are eliminating the 25-percent threshold policy in a budget neutral manner. Therefore, for FY 2019, we applied a one-time temporary budget neutrality adjustment factor of 0.990884 to ensure the elimination of the 25-percent threshold policy does not result in any change in estimated aggregate LTCH PPS payments.

We currently estimate total HCO payments for LTCH PPS standard Federal payment rate cases will increase from FY 2018 to FY 2019. Based on the FY 2017 LTCH cases that were used for the analyses in this final rule, we estimate that the FY 2018 HCO threshold of \$27,381 (as established in the FY 2018 IPPS/LTCH PPS final rule) will result in estimated HCO payments for LTCH PPS standard Federal payment rate cases in FY 2018 that are below the 7.975 percent target. Specifically, we currently estimate that HCO payments for LTCH PPS standard Federal payment rate cases would be approximately 7.41 percent of the estimated total LTCH PPS standard Federal payment rate payments in FY 2018. Combined with our estimate that FY 2019 HCO payments for LTCH PPS standard Federal payment rate cases would be 7.975 percent of estimated total LTCH PPS standard Federal payment rate payments in FY 2019, this will result in an estimated increase in HCO payments of 0.6 percent between FY 2018 and

FY 2019. We note that, consistent with past practice, in calculating these estimated HCO payments, we increased estimated costs by the projected market basket percentage increase factor, as discussed in section V.D.3.b.(3). of the Addendum to this final rule.

Table IV shows the estimated impact of the final payment rate and final policy changes on LTCH PPS payments for LTCH PPS standard Federal payment rate cases for FY 2019 by comparing estimated FY 2018 LTCH PPS payments to estimated FY 2019 LTCH PPS payments. (As noted earlier, our analysis does not reflect changes in LTCH admissions or case-mix intensity.) We note that these impacts do not include LTCH PPS site neutral payment rate cases for the reasons discussed in section I.J.4. of this Appendix.

As we discuss in detail throughout this final rule, based on the most recent available data, we believe that the provisions of this final rule relating to the LTCH PPS, which are projected to result in an overall increase in estimated aggregate LTCH PPS payments, and the resulting LTCH PPS payment amounts will result in appropriate Medicare payments that are consistent with the statute.

Comment: Some commenters objected to our expectation that costs and resource use for cases paid at the site neutral payment rate will likely mirror the costs and resource use for IPPS cases assigned to the same MS-DRG based on a comparison of FY 2017 LTCH site neutral payment rate cases. These commenters also believed that LTCH site neutral payment rate cases continue to be misaligned from a clinical and resource use perspective with respective IPPS-comparable amount payments, and requested CMS conduct a DRG-level study comparing the relative levels of clinical severity, lengths of stay, cost, and Medicare payment.

Response: As we stated above, we believe that LTCH PPS payment amounts will result in appropriate Medicare payments that are consistent with the statute. Furthermore, the site neutral payment rate is established by statute. Section 1886(m)(6)(B)(i)(II) of the Act defines the site neutral payment rate as the lower of the IPPS comparable per diem amount as determined under § 412.529(d)(4), including any applicable outlier payments as specified in § 412.525(a); or 100 percent of the estimated cost of the case as determined under existing § 412.529(d)(2). In addition, LTCH discharges from FY 2017 for site neutral payment rate cases were not fully subject to the site neutral payment rate because of the transitional blended payment period provided by the statute (meaning that all claims which were subject to the site neutral payment rate in FY 2017 were paid under the transitional blended payment rate, which was based on 50 percent of the LTCH PPS standard Federal payment rate). Therefore, the analysis presented by commenters based on FY 2017 claims data does not invalidate our assumptions regarding the costs and resource use for site neutral payment rate cases because the FY 2017 claims appear to not yet reflect the expected change in cost and resources once the payment for site neutral payment rate cases is fully based on the site neutral payment rate. We will also take this opportunity to remind commenters, as we have stated in the past in response to similar comments (82 FR 38574 through 38575), our assumption on the costs and resources used for site neutral payment rate cases is based upon full implementation of the site neutral payment rate, and since discharges in FY 2017 were not subject to the full site neutral payment rate, this data does not reflect that assumption. We will continue to monitor the

data and provide stakeholders with such information as appropriate, while guarding against drawing conclusions from limited or “immature” data.

## 2. Impact on Rural Hospitals

For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of an urban area and has fewer than 100 beds. As shown in Table IV, we are projecting no change in estimated payments for LTCH PPS standard Federal payment rate cases for LTCHs located in a rural area. This estimated impact is based on the FY 2017 data for the 21 rural LTCHs (out of 409 LTCHs) that were used for the impact analyses shown in Table IV.

## 3. Anticipated Effects of LTCH PPS Payment Rate Changes and Policy Changes

### a. Budgetary Impact

Section 123(a)(1) of the BBRA requires that the PPS developed for LTCHs “maintain budget neutrality.” We believe that the statute’s mandate for budget neutrality applies only to the first year of the implementation of the LTCH PPS (that is, FY 2003). Therefore, in calculating the FY 2003 standard Federal payment rate under § 412.523(d)(2), we set total estimated payments for FY 2003 under the LTCH PPS so that estimated aggregate payments under the LTCH PPS were estimated to equal the amount that would have been paid if the LTCH PPS had not been implemented.

Section 1886(m)(6)(A) of the Act establishes a dual rate LTCH PPS payment structure with two distinct payment rates for LTCH discharges beginning in FY 2016. Under this statutory change, LTCH discharges that meet the patient-level criteria for exclusion from the site neutral payment rate (that is, LTCH PPS standard Federal

payment rate cases) are paid based on the LTCH PPS standard Federal payment rate.

LTCH discharges paid at the site neutral payment rate are generally paid the lower of the IPPS comparable per diem amount, including any applicable HCO payments, or 100 percent of the estimated cost of the case. The statute also establishes a transitional payment method for cases that are paid at the site neutral payment rate for LTCH discharges occurring in cost reporting periods beginning during FY 2016 through FY 2019, under which the site neutral payment rate cases are paid based on a blended payment rate calculated as 50 percent of the applicable site neutral payment rate amount for the discharge and 50 percent of the applicable LTCH PPS standard Federal payment rate for the discharge.

As discussed in section I.J. of this Appendix, we project an increase in aggregate LTCH PPS payments in FY 2019 of approximately \$39 million. This estimated increase in payments reflects the projected increase in payments to LTCH PPS standard Federal payment rate cases of approximately \$35 million and the projected increase in payments to site neutral payment rate cases of approximately \$4 million under the dual rate LTCH PPS payment rate structure required by the statute beginning in FY 2016.

As discussed in section V.D. of the Addendum to this final rule, our actuaries project cost and resource changes for site neutral payment rate cases due to the site neutral payment rates required under the statute. Specifically, our actuaries project that the costs and resource use for cases paid at the site neutral payment rate will likely be lower, on average, than the costs and resource use for cases paid at the LTCH PPS standard Federal payment rate, and will likely mirror the costs and resource use for IPPS

cases assigned to the same MS-DRG. While we are able to incorporate this projection at an aggregate level into our payment modeling, because the historical claims data that we are using in this final rule to project estimated FY 2019 LTCH PPS payments (that is, FY 2017 LTCH claims data) do not reflect this actuarial projection, we are unable to model the impact of the change in LTCH PPS payments for site neutral payment rate cases at the same level of detail with which we are able to model the impacts of the changes to LTCH PPS payments for LTCH PPS standard Federal payment rate cases. Therefore, Table IV only reflects changes in LTCH PPS payments for LTCH PPS standard Federal payment rate cases and, unless otherwise noted, the remaining discussion in section I.J.4. of this Appendix refers only to the impact on LTCH PPS payments for LTCH PPS standard Federal payment rate cases. In the following section, we present our provider impact analysis for the changes that affect LTCH PPS payments for LTCH PPS standard Federal payment rate cases.

b. Impact on Providers

The basic methodology for determining a per discharge payment for LTCH PPS standard Federal payment rate cases is currently set forth under §§ 412.515 through 412.538. In addition to adjusting the LTCH PPS standard Federal payment rate by the MS-LTC-DRG relative weight, we make adjustments to account for area wage levels and SSOs. LTCHs located in Alaska and Hawaii also have their payments adjusted by a COLA. Under our application of the dual rate LTCH PPS payment structure, the LTCH PPS standard Federal payment rate is generally only used to determine payments for LTCH PPS standard Federal payment rate cases (that is, those LTCH PPS cases that meet

the statutory criteria to be excluded from the site neutral payment rate). LTCH discharges that do not meet the patient-level criteria for exclusion are paid the site neutral payment rate, which we are calculating as the lower of the IPPS comparable per diem amount as determined under § 412.529(d)(4), including any applicable outlier payments, or 100 percent of the estimated cost of the case as determined under existing § 412.529(d)(2). In addition, when certain thresholds are met, LTCHs also receive HCO payments for both LTCH PPS standard Federal payment rate cases and site neutral payment rate cases that are paid at the IPPS comparable per diem amount.

To understand the impact of the changes to the LTCH PPS payments for LTCH PPS standard Federal payment rate cases presented in this final rule on different categories of LTCHs for FY 2019, it is necessary to estimate payments per discharge for FY 2018 using the rates, factors, and the policies established in the FY 2018 IPPS/LTCH PPS final rule and estimate payments per discharge for FY 2019 using the rates, factors, and the policies in this FY 2019 IPPS/LTCH PPS final rule (as discussed in section VII. of the preamble of this final rule and section V. of the Addendum to this final rule). As discussed elsewhere in this final rule, these estimates are based on the best available LTCH claims data and other factors, such as the application of inflation factors to estimate costs for HCO cases in each year. The resulting analyses can then be used to compare how our policies applicable to LTCH PPS standard Federal payment rate cases affect different groups of LTCHs.

For the following analysis, we group hospitals based on characteristics provided in the OSCAR data, cost report data in HCRIS, and PSF data. Hospital groups included the following:

- Location: large urban/other urban/rural.
- Participation date.
- Ownership control.
- Census region.
- Bed size.

c. Calculation of LTCH PPS Payments for LTCH PPS Standard Federal Payment Rate Cases

For purposes of this impact analysis, to estimate the per discharge payment effects of our final policies on payments for LTCH PPS standard Federal payment rate cases, we simulated FY 2018 and FY 2019 payments on a case-by-case basis using historical LTCH claims from the FY 2017 MedPAR files that met or would have met the criteria to be paid at the LTCH PPS standard Federal payment rate if the statutory patient-level criteria had been in effect at the time of discharge for all cases in the FY 2017 MedPAR files. For modeling FY 2018 LTCH PPS payments, we used the FY 2018 standard Federal payment rate of \$41,415.11 (or \$ 40,595.02 for LTCHs that failed to submit quality data as required under the requirements of the LTCH QRP). Similarly, for modeling payments based on the FY 2019 LTCH PPS standard Federal payment rate, we used the FY 2019 standard Federal payment rate of \$41,579.65 (or \$40,759.12 for LTCHs that failed to submit quality data as required under the requirements of the LTCH

QRP). In each case, we applied the applicable adjustments for area wage levels and the COLA for LTCHs located in Alaska and Hawaii. Specifically, for modeling FY 2018 LTCH PPS payments, we used the current FY 2018 labor-related share (66.2 percent), the wage index values established in the Tables 12A and 12B listed in the Addendum to the FY 2018 IPPS/LTCH PPS final rule (which are available via the Internet on the CMS website), the FY 2018 HCO fixed-loss amount for LTCH PPS standard Federal payment rate cases of \$27,381 (as discussed in section V.D. of the Addendum to that final rule), and the FY 2018 COLA factors (shown in the table in section V.C. of the Addendum to that final rule) to adjust the FY 2018 nonlabor-related share (33.8 percent) for LTCHs located in Alaska and Hawaii. Similarly, for modeling FY 2019 LTCH PPS payments, we used the FY 2019 LTCH PPS labor-related share (66.0 percent), the FY 2019 wage index values from Tables 12A and 12B listed in section VI. of the Addendum to this final rule (which are available via the Internet on the CMS website), the FY 2019 fixed-loss amount for LTCH PPS standard Federal payment rate cases of \$27,124 (as discussed in section V.D.3. of the Addendum to this final rule), and the FY 2019 COLA factors (shown in the table in section V.C. of the Addendum to this final rule) to adjust the FY 2019 nonlabor-related share (34.0 percent) for LTCHs located in Alaska and Hawaii. We note that in modeling payments for HCO cases for LTCH PPS standard Federal payment rate cases, we applied an inflation factor of 5.7 percent (determined by the Office of the Actuary) to update the 2017 costs of each case.

The impacts that follow reflect the estimated “losses” or “gains” among the various classifications of LTCHs from FY 2018 to FY 2019 based on the final payment

rates and policy changes applicable to LTCH PPS standard Federal payment rate cases presented in this final rule. Table IV illustrates the estimated aggregate impact of the change in LTCH PPS payments for LTCH PPS standard Federal payment rate cases among various classifications of LTCHs. (As discussed previously, these impacts do not include LTCH PPS site neutral payment rate cases.)

- The first column, LTCH Classification, identifies the type of LTCH.
- The second column lists the number of LTCHs of each classification type.
- The third column identifies the number of LTCH cases expected to meet the LTCH PPS standard Federal payment rate criteria.
- The fourth column shows the estimated FY 2018 payment per discharge for LTCH cases expected to meet the LTCH PPS standard Federal payment rate criteria (as described previously).
- The fifth column shows the estimated FY 2019 payment per discharge for LTCH cases expected to meet the LTCH PPS standard Federal payment rate criteria (as described previously).
- The sixth column shows the percentage change in estimated payments per discharge for LTCH cases expected to meet the LTCH PPS standard Federal payment rate criteria from FY 2018 to FY 2019 due to the annual update to the standard Federal rate (as discussed in section V.A.2. of the Addendum to this final rule).
- The seventh column shows the percentage change in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019 for changes to the area wage level adjustment (that is, the wage indexes and the

labor-related share), including the application of the area wage level budget neutrality factor (as discussed in section V.B. of the Addendum to this final rule).

- The eighth column shows the percentage change in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 (Column 4) to FY 2019 (Column 5) for all changes.

**TABLE IV: IMPACT OF PAYMENT RATE AND POLICY CHANGES TO LTCH PPS PAYMENTS FOR LTCH PPS STANDARD FEDERAL PAYMENT RATE CASES FOR FY 2019 (ESTIMATED FY 2018 PAYMENTS COMPARED TO ESTIMATED FY 2019 PAYMENTS)**

<b>LTCH Classification (1)</b>	<b>No. of LTCHS (2)</b>	<b>Number of LTCH PPS Standard Payment Rate Cases (3)</b>	<b>Average FY 2018 LTCH PPS Payment Per Standard Payment Rate (4)</b>	<b>Average FY 2019 LTCH PPS Payment Per Standard Payment Rate<sup>1</sup> (5)</b>	<b>Percent Change Due to Change to the Annual Update to the Standard Federal Rate<sup>2</sup> (6)</b>	<b>Percent Change Due to Changes to Area Wage Adjustment with Wage Budget Neutrality<sup>3</sup> (7)</b>	<b>Percent Change Due to All Standard Payment Rate Changes<sup>4</sup> (8)</b>
<b>ALL PROVIDERS</b>	409	75,416	\$46,852	\$47,323	1.3	0	1.0
<b>BY LOCATION:</b>							
<b>RURAL</b>	21	2,457	\$39,339	\$39,694	1.3	-0.1	0.9
<b>URBAN</b>	388	72,959	\$47,105	\$47,580	1.3	0	1.0
<b>LARGE</b>	195	40,491	\$50,164	\$50,727	1.3	0	1.1
<b>OTHER</b>	193	32,468	\$43,291	\$43,655	1.3	0	0.9
<b>BY PARTICIPATION DATE:</b>							
<b>BEFORE OCT. 1983</b>	11	1,923	\$43,083	\$43,240	1.3	-0.5	0.4
<b>OCT. 1983 - SEPT. 1993</b>	42	9,632	\$51,709	\$52,462	1.3	0.2	1.5
<b>OCT. 1993 - SEPT. 2002</b>	169	31,338	\$45,565	\$45,982	1.3	0	0.9
<b>AFTER OCTOBER 2002</b>	187	32,523	\$46,877	\$47,334	1.3	0	1.0

<b>LTCH Classification (1)</b>	<b>No. of LTCHS (2)</b>	<b>Number of LTCH PPS Standard Payment Rate Cases (3)</b>	<b>Average FY 2018 LTCH PPS Payment Per Standard Payment Rate (4)</b>	<b>Average FY 2019 LTCH PPS Payment Per Standard Payment Rate<sup>1</sup> (5)</b>	<b>Percent Change Due to Change to the Annual Update to the Standard Federal Rate<sup>2</sup> (6)</b>	<b>Percent Change Due to Changes to Area Wage Adjustment with Wage Budget Neutrality<sup>3</sup> (7)</b>	<b>Percent Change Due to All Standard Payment Rate Changes<sup>4</sup> (8)</b>
<b>BY OWNERSHIP TYPE:</b>							
<b>VOLUNTARY</b>	77	10,614	\$48,824	\$49,600	1.3	0.3	1.6
<b>PROPRIETARY</b>	319	63,040	\$46,378	\$46,788	1.3	-0.1	0.9
<b>GOVERNMENT</b>	13	1,762	\$51,945	\$52,720	1.3	0.0	1.5
<b>BY REGION:</b>							
<b>NEW ENGLAND</b>	12	2,707	\$43,164	\$43,282	1.3	-0.4	0.3
<b>MIDDLE ATLANTIC</b>	24	5,959	\$50,920	\$51,542	1.3	-0.1	1.2
<b>SOUTH ATLANTIC</b>	66	13,792	\$47,641	\$48,116	1.3	-0.1	1.0
<b>EAST NORTH CENTRAL</b>	68	11,843	\$46,386	\$46,694	1.3	-0.3	0.7
<b>EAST SOUTH CENTRAL</b>	36	6,385	\$45,490	\$45,958	1.3	0	1.1
<b>WEST NORTH CENTRAL</b>	28	4,412	\$45,951	\$46,416	1.3	-0.3	1.0
<b>WEST SOUTH CENTRAL</b>	120	18,361	\$41,402	\$41,778	1.3	0.2	0.9
<b>MOUNTAIN</b>	26	7,887	\$58,121	\$59,196	1.3	-0.5	0.4
<b>PACIFIC</b>	29	4,070	\$47,897	\$48,099	1.4	0.7	1.9
<b>BY BED SIZE:</b>							
<b>BEDS: 0-24</b>	43	4,206	\$44,740	\$44,984	1.3	-0.4	0.6

<b>LTCH Classification (1)</b>	<b>No. of LTCHS (2)</b>	<b>Number of LTCH PPS Standard Payment Rate Cases (3)</b>	<b>Average FY 2018 LTCH PPS Payment Per Standard Payment Rate (4)</b>	<b>Average FY 2019 LTCH PPS Payment Per Standard Payment Rate<sup>1</sup> (5)</b>	<b>Percent Change Due to Change to the Annual Update to the Standard Federal Rate<sup>2</sup> (6)</b>	<b>Percent Change Due to Changes to Area Wage Adjustment with Wage Budget Neutrality<sup>3</sup> (7)</b>	<b>Percent Change Due to All Standard Payment Rate Changes<sup>4</sup> (8)</b>
<b>BEDS: 25-49</b>	185	26,270	\$44,623	\$45,026	1.3	0	0.9
<b>BEDS: 50-74</b>	107	20,178	\$47,733	\$48,236	1.3	0	1.1
<b>BEDS: 75-124</b>	43	12,086	\$50,145	\$50,767	1.3	0.1	1.3
<b>BEDS: 125-199</b>	22	7,709	\$47,404	\$47,762	1.3	-0.3	0.8
<b>BEDS: 200+</b>	9	4,967	\$47,988	\$48,675	1.3	0.5	1.5

<sup>1</sup> Estimated FY 2019 LTCH PPS payments for LTCH PPS standard Federal payment rate criteria based on the payment rate and factor changes applicable to such cases presented in the preamble of and the Addendum to this final rule.

<sup>2</sup> Percent change in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019 for the annual update to the LTCH PPS standard Federal payment rate.

<sup>3</sup> Percent change in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019 for changes to the area wage level adjustment under § 412.525(c) (as discussed in section V.B. of the Addendum to this final rule).

<sup>4</sup> Percent change in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 (shown in Column 4) to FY 2019 (shown in Column 5), including all of the changes to the rates and factors applicable to such cases presented in the preamble and the Addendum to this final rule. We note that this column, which shows the percent change in estimated payments per discharge for all changes, does not equal the sum of the percent changes in estimated payments per discharge for the annual update to the LTCH PPS standard Federal payment rate (Column 6) and the changes to the area wage level adjustment with budget neutrality (Column 7) due to the effect of estimated changes in estimated payments to aggregate HCO payments for LTCH PPS standard Federal payment rate cases (as discussed in this impact analysis), as well as other interactive effects that cannot be isolated.

#### d. Results

Based on the FY 2017 LTCH cases (from 409 LTCHs) that were used for the analyses in this final rule, we have prepared the following summary of the impact (as shown in Table IV) of the LTCH PPS payment rate and policy changes for LTCH PPS standard Federal payment rate cases presented in this final rule. The impact analysis in Table IV shows that estimated payments per discharge for LTCH PPS standard Federal payment rate cases are projected to increase 1.0 percent, on average, for all LTCHs from FY 2018 to FY 2019 as a result of the payment rate and policy changes applicable to LTCH PPS standard Federal payment rate cases presented in this final rule. This estimated 1.0 percent increase in LTCH PPS payments per discharge was determined by comparing estimated FY 2019 LTCH PPS payments (using the payment rates and factors discussed in this final rule) to estimated FY 2018 LTCH PPS payments for LTCH discharges which will be LTCH PPS standard Federal payment rate cases if the dual rate LTCH PPS payment structure was or had been in effect at the time of the discharge (as described in section I.J.4. of this Appendix).

As stated previously, we are updating the LTCH PPS standard Federal payment rate for FY 2019 by 1.35 percent. For LTCHs that fail to submit quality data under the requirements of the LTCH QRP, as required by section 1886(m)(5)(C) of the Act, a 2.0 percentage point reduction is applied to the annual update to the LTCH PPS standard Federal payment rate. Consistent with § 412.523(d)(4), we also are applying an area wage level budget neutrality factor to the FY 2019 LTCH PPS standard Federal payment rate of 0.999713, based on the best available data at this time, to ensure that any changes

to the area wage level adjustment (that is, the annual update of the wage index values and labor-related share) will not result in any change (increase or decrease) in estimated aggregate LTCH PPS standard Federal payment rate payments. Finally, we are making a budget neutrality adjustment of 0.990884 for the elimination of the 25-percent threshold policy (discussed in VII.E. of the preamble of this final rule). As we also explained earlier in this section, for most categories of LTCHs (as shown in Table IV, Column 6), the estimated payment increase due to the 1.35 percent annual update to the LTCH PPS standard Federal payment rate is projected to result in approximately a 1.3 percent increase in estimated payments per discharge for LTCH PPS standard Federal payment rate cases for all LTCHs from FY 2018 to FY 2019. This is because our estimate of the changes in payments due to the update to the LTCH PPS standard Federal payment rate also reflects estimated payments for SSO cases that are paid using a methodology that is not entirely affected by the update to the LTCH PPS standard Federal payment rate. Consequently, for certain hospital categories, we estimate that payments to LTCH PPS standard Federal payment rate cases may increase by less than 1.35 percent due to the annual update to the LTCH PPS standard Federal payment rate for FY 2019.

(1) Location

Based on the most recent available data, the vast majority of LTCHs are located in urban areas. Only approximately 5 percent of the LTCHs are identified as being located in a rural area, and approximately 3 percent of all LTCH PPS standard Federal payment rate cases are expected to be treated in these rural hospitals. The impact analysis presented in Table IV shows that the overall average percent increase in

estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019 for all hospitals is 1.0 percent. For rural LTCHs, estimated payments for LTCH PPS standard Federal payment rate cases are expected to increase 0.9 percent. For urban LTCHs, we estimate an increase of 1.0 percent from FY 2018 to FY 2019. Among the urban LTCHs, large urban LTCHs are projected to experience an increase of 1.1 percent in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019, and such payments for the remaining urban LTCHs are projected to increase 0.9 percent, as shown in Table IV.

(2) Participation Date

LTCHs are grouped by participation date into four categories: (1) before October 1983; (2) between October 1983 and September 1993; (3) between October 1993 and September 2002; and (4) October 2002 and after. Based on the most recent available data, the categories of LTCHs with the largest expected percentage of LTCH PPS standard Federal payment rate cases (approximately 43 percent) are in LTCHs that began participating in the Medicare program after October 2002, and they are projected to experience a 1.0 percent increase in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019, as shown in Table IV.

Approximately 3 percent of LTCHs began participating in the Medicare program before October 1983, and these LTCHs are projected to experience an average percent increase of 0.4 percent in estimated payments per discharge for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019. Approximately 10 percent of LTCHs began participating in the Medicare program between October 1983 and

September 1993, and these LTCHs are projected to experience an increase of 1.5 percent in estimated payments for LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019. LTCHs that began participating in the Medicare program between October 1993 and October 1, 2002, which treat approximately 42 percent of all LTCH PPS standard Federal payment rate cases, are projected to experience a 0.9 percent increase in estimated payments from FY 2018 to FY 2019.

### (3) Ownership Control

LTCHs are grouped into four categories based on ownership control type: voluntary, proprietary, government and unknown. Based on the most recent available data, approximately 19 percent of LTCHs are identified as voluntary (Table IV). The majority (approximately 78 percent) of LTCHs are identified as proprietary, while government owned and operated LTCHs represent approximately 3 percent of LTCHs. Based on ownership type, voluntary LTCHs are expected to experience a 1.6 percent increase in payments to LTCH PPS standard Federal payment rate cases, while proprietary LTCHs are expected to experience an average increase of 0.9 percent in payments to LTCH PPS standard Federal payment rate cases. Government owned and operated LTCHs, meanwhile, are expected to experience a 1.5 percent increase in payments to LTCH PPS standard Federal payment rate cases from FY 2018 to FY 2019.

### (4) Census Region

Estimated payments per discharge for LTCH PPS standard Federal payment rate cases for FY 2019 are projected to increase across all census regions. LTCHs located in the Pacific are projected to experience the largest increase at 1.9 percent. The New

England and Mountain regions are projected to experience the smallest increase of 0.3 and 0.4 percent, respectively. These regional variations are largely due to updates in the wage index.

#### (5) Bed Size

LTCHs are grouped into six categories based on bed size: 0-24 beds; 25-49 beds; 50-74 beds; 75-124 beds; 125-199 beds; and greater than 200 beds. We project that LTCHs with 0-24 beds will experience the smallest increase in payments for LTCH PPS standard Federal payment rate cases of 0.6 percent. We expect LTCHs with 200 or more beds to experience the largest increase at 1.5 percent.

#### 4. Effect on the Medicare Program

As stated previously, we project that the provisions of this final rule will result in an increase in estimated aggregate LTCH PPS payments to LTCH PPS standard Federal payment rate cases in FY 2019 relative to FY 2018 of approximately \$35 million (or approximately 1.0 percent) for the 409 LTCHs in our database. Although, as stated previously, the hospital-level impacts do not include LTCH PPS site neutral payment rate cases, we estimate that the provisions of this final rule will result in an increase in estimated aggregate LTCH PPS payments to site neutral payment rate cases in FY 2019 relative to FY 2018 of approximately \$4 million (or approximately 0.4 percent) for the 409 LTCHs in our database. Therefore, we project that the provisions of this final rule will result in an increase in estimated aggregate LTCH PPS payments for all LTCH cases in FY 2019 relative to FY 2018 of approximately \$39 million (or approximately 0.9 percent) for the 409 LTCHs in our database.

#### 5. Effect on Medicare Beneficiaries

Under the LTCH PPS, hospitals receive payment based on the average resources consumed by patients for each diagnosis. We do not expect any changes in the quality of

care or access to services for Medicare beneficiaries as a result of this final rule, but we continue to expect that paying prospectively for LTCH services will enhance the efficiency of the Medicare program. As discussed above, we do not expect the continued implementation of the site neutral payment system to have a negative impact access to or quality of care, as demonstrated in areas where there is little or no LTCH presence, general short-term acute care hospitals are effectively providing treatment for the same types of patients that are treated in LTCHs.

K. Effects of Requirements for the Hospital Inpatient Quality Reporting (IQR) Program

## 1. Background

In section VIII.A. of the preambles of the proposed rule (83 FR 20470 through 20500) and this final rule, we discuss our current and proposed requirements for hospitals to report quality data under the Hospital IQR Program in order to receive the full annual percentage increase for the FY 2021 payment determination.

In this final rule, we are finalizing our policies to: (1) extend eCQM reporting requirements to the CY 2019 reporting period/FY 2021 payment determination; (2) require the 2015 Edition of CEHRT for eCQMs beginning with the CY 2019 reporting period/FY 2021 payment determination; (3) remove 17 claims-based measures beginning with the CY 2018 reporting period/FY 2020 payment determination; (4) remove two structural measures beginning with the CY 2018 reporting period/FY 2020 payment determination; (5) remove two claims-based measures beginning with the CY 2019 reporting period/FY 2021 payment determination; (6) remove three chart-abstracted measures beginning with the CY 2019 reporting period/FY 2021 payment determination; (7) remove one claims-based measure beginning with the CY 2020 reporting period/FY 2022 payment determination; (8) remove six chart-abstracted measures beginning with the CY 2020 reporting period/FY 2022 payment determination; (9) remove seven eCQMs beginning with CY 2020 reporting period/FY 2022 payment determination; (10) remove one claims-based measure beginning with the CY 2021 reporting period/FY 2023 payment determination; and (11) adopt a new measure removal factor.

We do not believe our finalized proposal to adopt a new measure removal factor will directly affect burden. However, as further explained in section XIV.B.3. of the preamble of this final rule, we believe that there will be an overall decrease in the estimated information collection burden for hospitals due to the other proposed policies. We refer readers to section XIV.B.3. of the preamble of this final rule for a summary of our information collection burden estimate calculations. The effects of these proposals are discussed in more detail below.

## 2. Impact of Extension of eCQM Reporting Requirements

In the FY 2018 IPPS/LTCH PPS final rule, we finalized policies to require hospitals to submit one, self-selected calendar quarter of data for four eCQMs in the Hospital IQR Program measure set for the CY 2018 reporting period/FY 2020 payment determination (82 FR 38355 through 38361). In section VIII.A.11.d.(2) of the preamble of this final rule, we are finalizing our proposal to extend those reporting requirements for the CY 2019 reporting period/FY 2021 payment determination, such that hospitals will be required to submit one, self-selected calendar quarter of data for four eCQMs in the Hospital IQR Program measure set. Therefore, we believe our burden estimate of 40 minutes per hospital per year (10 minutes per record x 4 eCQMs x 1 quarter) associated with eCQM reporting requirements finalized for the CY 2018 reporting period/FY 2020 payment determination will also apply to the CY 2019 reporting period/FY 2021 payment determination.

### 3. Impact of Requirement to Certify EHR to the 2015 Edition

In section VIII.A.11.d.(3) of the preamble of this final rule, we discuss our finalized proposal to require use of EHR technology certified to the 2015 Edition beginning with the CY 2019 reporting period/FY 2021 payment determination, which aligns with previously established requirements in the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs). As described in section XIV.B.3.g. of the preamble of this final rule, we expect this finalized proposal to have no impact on information collection burden for the Hospital IQR Program because this policy does not require hospitals to submit new data to CMS.

With respect to any costs unrelated to data submission, although this finalized proposal will require some investment in systems updates, the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs) previously finalized a requirement that hospitals use the 2015 Edition of CEHRT beginning with the CY 2019 reporting period/FY 2021 payment determination (80 FR 62761 through 62955). Because all hospitals participating in the Hospital IQR Program are subsection (d) hospitals that also participate in the Medicare and Medicaid Promoting Interoperability Programs (previously known as the Medicare and Medicaid EHR Incentive Programs), we do not anticipate any additional costs as a result of this finalized proposal.

#### 4. Impact of Removal of Chart-Abstracted Measures

In section VIII.A.5.b.(8) of the preamble of this final rule, beginning with the CY 2019 reporting period/FY 2021 payment determination, we are finalizing our proposals to remove three chart-abstracted clinical process of care measures (ED-1, IMM-2, and VTE-6). In sections VIII.A.5.b.(2)(b)<sup>428</sup> and VIII.A.5.b.(8)(b) of the preamble of this final rule, beginning with the CY 2020 reporting period/FY 2022 payment determination, we also are finalizing our proposals to remove five National Healthcare Safety Network (NHSN) hospital-acquired infection (HAI) measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI) and one chart-abstracted clinical process of care measure (ED-2). We note that as we discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we proposed to remove the NHSN HAI measures beginning with the CY 2019 reporting period/FY 2021 payment determination, but are finalizing a modified version of our proposal delaying the measures' removal until the CY 2020 reporting period/FY 2022 payment determination. Our estimates below have been updated to reflect this change.

As described in detail in section XIV.B.3. of the preamble of this final rule, we expect our finalized proposals to remove the clinical process of care chart-abstracted measures will reduce the information collection burden by 1,046,071 hours and approximately \$38.3 million for the CY 2019 reporting period/FY 2021 payment determination, and an additional 858,000 hours and approximately \$31.3 million for the CY 2020 reporting period/FY 2022 payment determination for the Hospital IQR

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<sup>428</sup> As discussed in section VIII.A.5.b.(2)(b) of the preamble of this final rule, we proposed to remove the NHSN HAI measures beginning with the CY 2019 reporting period/FY 2021 payment determination, but are delaying their removal until the CY 2020 reporting period/FY 2022 payment determination.

Program. We note that the burden of data collection for the NHSN HAI measures (CDI, CAUTI, CLABSI, MRSA Bacteremia, and Colon and Abdominal Hysterectomy SSI) is accounted for under the Centers for Disease Control and Prevention (CDC) National Health and Safety Network (NHSN) OMB control number 0920-0666. Because burden associated with submitting data for the NHSN HAI measures is captured under a separate OMB control number, we do not provide an independent estimate of the information collection burden associated with these measures for the Hospital IQR Program.

The data validation activities, however, are conducted by CMS. Since the measures were adopted into the Hospital IQR Program, CMS has validated the data for purposes of the Program. Therefore, this burden has been captured under the Hospital IQR Program's OMB control number 0938-1022. While we did not propose any changes directly to the validation process related to chart-abstracted measures, based on our finalized proposals to remove five NHSN HAI and four clinical process of care chart-abstracted measures (in sections VIII.A.5.b.(2)(b) and VIII.A.5.b.(8) of the preamble of this final rule), we believe that hospitals will experience an overall reduction in burden associated with validation of chart-abstracted measures beginning with the FY 2023 payment determination because hospitals selected for validation are currently required to submit validation templates for the NHSN HAI measures for the Hospital IQR Program. In addition, based on our finalized proposals to remove the NHSN HAI measures, the information collection burden associated with submission of these validation templates will be eliminated from the Hospital IQR Program. As described in detail in section XIV.B.3.b.(3) of the preamble of this final rule, we estimate a total

decrease of 43,200 hours and approximately \$1.6 million as a result of discontinuing submission of NHSN HAI validation templates under the Hospital IQR Program. The finalized removal of NHSN HAI measures from the Hospital IQR Program, the subsequent cessation of validation processes for the NHSN HAI measures, the retention of these measures in the HAC Reduction Program, and the finalized implementation of a validation process for these measures under the HAC Reduction Program, represent no net change in information collection burden for the NHSN HAI measures across CMS hospital quality programs. Therefore, we do not anticipate any change under the CDC NHSN's OMB control number 0920-0666 due to our finalized proposals.

Furthermore, we anticipate that the costs to hospitals participating in the Hospital IQR Program, beyond that associated with information collection, will be reduced because hospitals will no longer need to review feedback reports for the NHSN HAI measures with slightly different measure rates for the same measures (under the Hospital IQR Program, a rolling four quarters of data are used to update the *Hospital Compare* website; under the Hospital VBP Program, 1-year periods are used for each of the baseline period and the performance period; and under the HAC Reduction Program, a 2-year performance period is used).

##### 5. Impact of Removal of Two Structural Measures

In section VIII.A.5.a. and VII.A.5.b.(1) of the preamble of this final rule, we are finalizing our proposals to remove two structural measures, Hospital Survey on Patient Safety Culture and Safe Surgery Checklist, beginning with the CY 2018 reporting period/FY 2020 payment determination. We believe these finalized proposals will result

in a minimal information collection burden reduction, which is addressed in section XIV.B.3. of the preamble of this final rule. In addition, we refer readers to VIII.A.4.b. of the preamble of this final rule, where we acknowledge that costs are multi-faceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining Program requirements. We believe it may be unnecessarily costly and/or of limited benefit to retain or maintain a measure which our analyses show no longer meaningfully supports program objectives (for example, informing beneficiary choice or payment scoring). As discussed in sections VIII.A.5.a. and VIII.A.5.b.(1) of the preamble of this final rule, we believe these measures are of limited utility for internal hospital quality improvement efforts because they do not provide individual patient level data or any information on patient outcomes. In addition, our analyses show that use of patient safety culture surveys and safe surgery checklists is widely in practice among hospitals. Therefore, we do not believe that these measures support the program objectives of facilitating internal hospital quality improvement efforts or informing beneficiary choice.

#### 6. Impact of the Removal of Claims-Based Measures

In sections VIII.A.5.b.(2)(a), (3), (4), (6), and (7) of the preamble of this final rule, we are finalizing our proposals to remove 17 claims-based measures PSI-90 (NQF #0531), READM-30-AMI (NQF #0505), READM-30-CABG (NQF #2515), READM-30-COPD (NQF #1891), READM-30-HF (NQF #0330), READM-30-PN (NQF #0506), READM-30-THA/TKA (NQF #1551), READM-30-STK, MORT-30-AMI (NQF #0230), MORT-30-HF (NQF #0229), MSPB (NQF #2158), Cellulitis Payment, GI

Payment, Kidney/UTI Payment, AA Payment, Chole and CDE Payment, and SFusion Payment) beginning with the CY 2018 reporting period/CY 2020 payment determination. In addition, in section VIII.A.5.b.(4) of the preamble of this final rule, we are finalizing our proposals to remove two claims-based measures (MORT-30-COPD (NQF #1893) and MORT-30-PN (NQF #0468)) beginning with the CY 2019 reporting period/FY 2021 payment determination. Furthermore, in sections VIII.A.5.b.(4) and VIII.A.5.b.(5), respectively, of the preamble of this final rule, we are finalizing our proposals to remove one-claims based measure (MORT-30-CABG (NQF #2558)) beginning with the CY 2020 reporting period/FY 2022 payment determination and one claims-based measure (Hip/Knee Complications (NQF #1550)) beginning with the CY 2021 reporting period/FY 2023 payment determination.

These claims-based measures are calculated using only data already reported to the Medicare program for payment purposes, therefore, we do not believe removing these measures will impact the information collection burden on hospitals. Nonetheless, we anticipate that hospitals will experience a general cost reduction associated with these proposals stemming from no longer having to review and track various program requirements or measure information in multiple confidential feedback and preview reports from multiple programs that reflect multiple measure rates due to varying scoring methodologies and reporting periods.

#### 7. Impact of the Removal of eCQMs

In section VIII.A.5.b.(9) of the preamble of this final rule, we are finalizing our proposals to remove seven eCQMs from the Hospital IQR Program eCQM measure set

beginning with the CY 2020 reporting period/FY 2022 payment determination. As described in section XIV.B.3. of this final rule, we do not anticipate that removal of these seven eCQMs will affect the information collection burden for hospitals. However, as discussed in section VIII.A.4.b. of the preamble of this final rule, we believe costs are multifaceted and include not only the burden associated with reporting, but also the costs associated with implementing and maintaining Program requirements, such as maintaining measure specifications in hospitals' EHR systems for all of the eCQMs available for use in the Hospital IQR Program. We further discuss costs unrelated to information collection associated with eCQM removal in section VIII.A.5.b.(9) of the preamble of this final rule.

#### 8. Summary of Effects

In summary, we estimate: (1) a total information collection burden reduction of 1,046,138 hours (-1,046,071 hours due to the finalized removal of ED-1, IMM-2, and VTE-6 measures for the CY 2019 reporting period/FY 2021 payment determination and -67 hours for no longer collecting data for the voluntary Hybrid HWR measure<sup>429</sup>) and a total cost reduction related to information collection of approximately \$38.3 million (-1,046,138 hours x \$36.58 per hour<sup>430</sup>) for the CY 2019 reporting period/FY 2021

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<sup>429</sup> In the FY 2018 IPPS/LTCH PPS final rule (82 FR 38350 through 38355), we finalized our proposal to collect data on a voluntary basis for the Hybrid HWR measure for the CY 2018 reporting period/FY 2020 payment determination. We estimated that approximately 100 hospitals would voluntarily report data for this measure, resulting in a total burden of 67 hours across all hospitals for the CY 2018 reporting period/FY 2020 payment determination (82 FR 38504). Because we only finalized voluntary collection of data for 1 year, voluntary collection of these data would no longer occur beginning with the CY 2019 reporting period/FY 2021 payment determination and subsequent years resulting in a reduction in burden of 67 hours across all hospitals.

<sup>430</sup> In the FY 2017 IPPS/LTCH PPS final rule (82 FR 38501), we finalized an hourly wage estimate of \$18.29 per hour, plus 100 percent overhead and fringe benefits, for the Hospital IQR Program. Accordingly, we calculate cost burden to hospitals using a wage plus benefits estimate of \$36.58 per hour.

payment determination; (2) a total information collection burden reduction of 858,000 hours (-858,000 hours due to the finalized removal of ED-2) and a total cost reduction related to information collection of approximately \$31.3 million (-858,000 hours x \$36.58 per hour<sup>431</sup>) for the CY 2020 reporting period/FY 2022 payment determination; and (3) a total information collection burden reduction of 43,200 hours (-43,200 hours due to no longer needing to validate NHSN HAI measures under the Hospital IQR Program) and a total information collection cost reduction of approximately \$1.6 million (-43,200 hours x \$36.58 per hour) for the CY 2021 reporting period/FY 2023 payment determination. As stated earlier, we also anticipate additional cost reductions unrelated to the information collection burden associated with our proposals, including, for example, no longer having to review and track measure information in multiple feedback reports from multiple programs and maintaining measure specifications in hospitals' EHR systems for all eCQMs available for use in the program.

Historically, 100 hospitals, on average, that participate in the Hospital IQR Program do not receive the full annual percentage increase in any fiscal year due to the failure to meet all requirements of this Program. We anticipate that the number of hospitals not receiving the full annual percentage increase will be approximately the same as in past years or slightly decrease. We believe that reducing the number of chart-abstracted measures used in the Hospital IQR Program will, at least in part, help increase hospitals' chances to meet all Program requirements and receive their full annual percentage increase.

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<sup>431</sup> Ibid.

We refer readers to section XIV.B.3. of the preamble of this final rule (information collection requirements) for a detailed discussion of the burden of the requirements for submitting data to the Hospital IQR Program.

L. Effects of Requirements for the PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program

In section VIII.B. of the preambles of the proposed rule (83 FR 20500 through 20510) and this final rule, we discuss our proposed and finalized policies for the quality data reporting program for PPS-exempt cancer hospitals (PCHs), which we refer to as the PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program. The PCHQR Program is authorized under section 1866(k) of the Act, which was added by section 3005 of the Affordable Care Act. There is no financial impact to PCH Medicare reimbursement if a PCH does not submit data.

In section VIII.B.3.b. of the preamble of this final rule, we are finalizing our proposals to remove four web-based, structural measures: (1) Oncology: Radiation Dose Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389) beginning with the FY 2021 program year. As discussed in section VIII.B.3.b.(2) of the preamble of this final rule, we are deferring finalization of our policies regarding future use of the Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and Central Line-Associated Bloodstream

Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139) in the PCHQR Program to a future 2018 final rule, most likely in the CY 2019 OPPS/ASC final rule targeted for release no later than November 2018. We will therefore address any change in burden associated with this policy decision, most likely, in the CY 2019 OPPS/ASC final rule. In addition, in section VIII.B.4. of the preamble of this final rule, we are finalizing our proposal to adopt one claims-based measure for the FY 2021 program year and subsequent years: 30-Day Unplanned Readmissions for Cancer Patients measure (NQF #3188). Based on the finalized measure removals and addition, the PCHQR Program measure set will consist of 13 measures for the FY 2021 program. Further, in section XIV.B.4.b. of the preamble of this final rule, we are finalizing our proposal to adopt a new time burden estimate, to be applied to structural and web-based tool measures for the FY 2021 program year and subsequent years. Specifically, we are finalizing our proposal to adopt the estimate of 15 minutes per measure, per PCH, for reporting these types of measures, which is the time estimate utilized by the Hospital IQR Program (80 FR 49762).

a. Summary of Burden Effects for the FY 2021 Program Year

(1) Removal of Web-Based Structural Measures

As explained in section XIV.B.4.c. of the preamble of this final rule, we anticipate that these finalized new requirements will reduce the overall burden on participating PCHs. Because we are finalizing our proposal to apply 15 minutes per measure as a burden estimate for structural measures and web-based tool measures and our proposal to remove the following web-based structural measures: (1) Oncology: Radiation Dose

Limits to Normal Tissues (PCH-14/NQF #0382); (2) Oncology: Medical and Radiation – Pain Intensity Quantified (PCH-16/NQF #0384); (3) Prostate Cancer: Adjuvant Hormonal Therapy for High Risk Patients (PCH-17/NQF #0390); and (4) Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Patients (PCH-18/NQF #0389)), we estimate a reduction of 1 hour (or 60 minutes) per PCH (15 minutes per measure x 4 measures = 60 minutes), and a total annual reduction of approximately 11 hours for all 11 PCHs (60 minutes x 11 PCHs/ 60 minutes per hour), as a result of the finalized removal of these four measures.

(2) Removal of Chart-Abstracted NHSN Measures

As discussed in section VIII.B.3.b.(2) of the preamble of this final rule, we are deferring finalization of our policies regarding future use of the Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure (PCH-5/NQF #0138) and Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure (PCH-4/NQF #0139) in the PCHQR Program to a future 2018 final rule, most likely in the CY 2019 OPPS/ASC final rule targeted for release no later than November 2018. We will therefore address any change in burden associated with this policy decision, most likely, in the CY 2019 OPPS/ASC final rule.

(3) Adoption of 30-Day Unplanned Readmissions for Cancer Patients Measure (NQF #3188)

We do not anticipate any change in burden on the PCHs associated with our finalized proposal to adopt a claims-based measure into the PCHQR Program beginning with the FY 2021 program year. This measure is claims-based and does not require

facilities to report any additional data beyond that already submitted on Medicare administrative claims for payment purposes. Therefore, we do not believe that there is any associated change in burden resulting from the finalization of this proposal.

In summary, because we are finalizing our proposals to remove 4 web-based, structural measures, we estimate a total burden reduction of 11 hours of burden per year for all 11 PCHs beginning with the FY 2021 program year.

M. Effects of Requirements for the Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

Under the LTCH QRP, the Secretary reduces by 2 percentage points the annual update to the LTCH PPS standard Federal rate for discharges for an LTCH during a fiscal year if the LTCH has not complied with the LTCH QRP requirements specified for that fiscal year. Information is not available to determine the precise number of LTCHs that will not meet the requirements to receive the full annual update for the FY 2019 payment determination.

We believe that the burden and costs associated with the LTCH QRP is the time and effort associated with complying with the requirements of the LTCH QRP. We intend to closely monitor the effects of this quality reporting program on LTCHs and to help facilitate successful reporting outcomes through ongoing stakeholder education, national trainings, and help desks.

We refer readers to section XIV.B.6. of the preamble of this final rule for details discussing information collection requirements for the LTCH QRP.

N. Effects of Requirements Regarding the Promoting Interoperability Programs

In section VIII.D. of the preambles of the proposed rule (83 FR 20515 through 20544) and this final rule, we discuss and finalize our proposals with a few modifications regarding a new performance-based scoring methodology and changes to the Stage 3 objectives and measures for eligible hospitals and CAHs that attest to CMS under the Medicare Promoting Interoperability Program. We are finalizing the new measure Query of PDMP and the Support Electronic Referral Loops by Receiving and Incorporating Health Information. We are finalizing the removal of the Coordination of Care Through Patient Engagement objective and its associated measures Secure Messaging, View, Download or Transmit, and Patient Generated Health Data as well as the measures Request/Accept Summary of Care, Clinical Information Reconciliation and Patient-Specific Education. We are renaming measures within the Health Information Exchange objective. These changes include changing the name from Send a Summary of Care, to Support Electronic Referral Loops by Sending Health Information; renaming the Public Health and Clinical Data Registry Reporting objective to Public Health and Clinical Data Exchange with the requirement to report on any two measures options; renaming the name the Patient Electronic Access to Health Information objective to Provider to Patient Exchange objective, and renaming the remaining measure, Provide Patient Access measure to Provide Patients Electronic Access to Their Health Information measure. We also are finalizing an any minimum 90-day EHR reporting period in CYs 2019 and 2020 for new and returning participants attesting to CMS or their State Medicaid agency; the CQM reporting period and criteria for CY 2019; and our proposal to codify the policies

for subsection (d) Puerto Rico hospitals to participate in the Medicare Promoting Interoperability Program for eligible hospitals, including policies previously implemented through program instruction.

We believe that, overall, these finalized proposals will reduce burden. We refer readers to section XIV.B.9. of the preamble of this final rule for additional discussion on the information collection effects associated with these finalized proposals.

In section VIII.D.12.a. of the preamble of this final rule, we are finalizing our proposal to amend 42 CFR 495.324(b)(2) and 495.324(b)(3) to align with current prior approval policy for MMIS and ADP systems at 45 CFR 95.611(a)(2)(ii), and (b)(2)(iii) and (iv), and to minimize burden on States. Specifically, we finalizing our proposals that the prior approval dollar threshold in § 495.324(b)(3) will be increased to \$500,000, and that a prior approval threshold of \$500,000 will be added to § 495.324(b)(2). In addition, in light of these finalized changes, we are finalizing our proposal to make a conforming amendment to the threshold in § 495.324(d) for prior approval of justifications for sole source acquisitions to be the same \$500,000 threshold. That threshold is currently aligned with the \$100,000 threshold in current 495.324(b)(3). Amending § 495.324(d) to preserve alignment with § 495.324(b)(3) maintains the consistency of our prior approval requirements. We believe that these finalized proposals also will reduce burden on States by raising the prior approval thresholds and generally aligning them with the thresholds for prior approval of MMIS and ADP acquisitions costs.

In section VIII.D.12.b. of the preamble of this final rule, we are finalizing our proposal to amend 42 CFR 495.322 to provide that the 90 percent FFP for Medicaid

Promoting Interoperability Program administration will no longer be available for most State expenditures incurred after September 30, 2022. We are finalizing a later sunset date, September 30, 2023, for the availability of 90 percent enhanced match for State administrative costs related to Medicaid Promoting Interoperability Program audit and appeals activities, as well as costs related to administering incentive payment disbursements and recoupments that might result from those activities. States will not be able to claim any Medicaid Promoting Interoperability Program administrative match for expenditures incurred after September 30, 2023. We do not believe that these finalized proposals will impose any additional burdens on States. We refer readers to section XIV.B.9. of the preamble of this final rule for additional discussion on the information collection effects associated with these proposals.

#### O. Alternatives Considered

This final rule contains a range of policies. It also provides descriptions of the statutory provisions that are addressed, identifies the proposed policies, and presents rationales for our decisions and, where relevant, alternatives that were considered.

For example, as discussed in section II.F.2.d. of the preamble of this final rule, section II.H.5.a. of the preamble of this final rule, and section II.A.4.g.. of the Addendum to this final rule, we considered the comments regarding the creation of a new MS-DRG for the assignment of procedures involving the utilization of CAR T-cell therapy drugs and cases representing patients who receive treatment involving CAR T-cell therapy as an alternative to our proposed MS-DRG assignment to MS-DRG 016 for FY 2019, and we considered comments to allow hospitals to utilize an alternative CCR specific to

procedures involving CAR T-cell therapy drugs for purposes of outlier payments, new technology add-on payments, and payments to IPPS excluded cancer hospitals.

As discussed in section II.A.4.g. of the Addendum to the proposed rule, the impact of an alternative CCR specific to procedures involving CAR T-cell therapy drugs is dependent on the relationship between the CCR that would otherwise be used and the alternative CCR used. For illustrative purposes, in the proposed rule, we discussed an example where if a hospital charged \$400,000 for a procedure involving the utilization of the CAR T-cell therapy drug described by ICD-10-PCS code XW033C3, the application of a hypothetical CCR of 0.25 results in a cost of \$100,000 ( $=\$400,000 * 0.25$ ), while the application of a hypothetical CCR of 1.00 results in a cost of \$400,000 ( $=\$400,000 * 1.0$ ).

The impact of the creation of a separate MS-DRG for procedures involving the utilization of CAR T-cell therapy drugs and cases representing patients receiving treatment involving CAR T-cell therapy is dependent on the relative weighting factor determined for the separate MS-DRG. In the proposed rule, we invited public comments on the most appropriate approach for determining the relative weighting factor under this alternative, such as an approach based on taking into account an appropriate portion of the average sales price (ASP) for these drugs, or other approaches.

Comments also suggested other alternative changes under the IPPS for FY 2019, including, but not limited to, the creation of a pass-through payment, and structural changes in new technology add-on payments for the drug therapy. The impacts of these would depend on the basis for the pass-through payment amount (for example, cost or

average sales price) or on the revised methodology for the new technology add-on payment (for example, a revision to the percentage of cost paid.)

As described more fully in section II.F.2.d. of the preamble of this final rule, given the potential for a new CMMI model and our request for feedback on this approach, we believe it would be premature to adopt changes to our existing payment mechanisms, either under the IPPS or for IPPS-excluded cancer hospitals, specifically for CAR T-cell therapy. Therefore, we did not adopt the alternatives discussed above that we considered for CAR T-cell therapy for FY 2019, including, but not limited to, the creation of a pass-through payment; structural changes in new technology add-on payments for the drug therapy; changes in the usual cost-to-charge ratios (CCRs) used in ratesetting and payment, including those used in determining new technology add-on payments, outlier payments, and payments to IPPS excluded cancer hospitals; and the creation of a new MS-DRG specifically for CAR T-cell therapy.

As discussed in section VIII.A.5.b.(9) of the preamble of this final rule, in the context of removing seven eCQMs from the Hospital IQR Program for the CY 2020 reporting period/FY 2022 payment determination and subsequent years, we considered proposing to remove these seven eCQMs 1 year earlier, beginning with the CY 2019 reporting period/FY 2021 payment determination. Our analyses indicated no estimated change in average information collection reporting burden between these two options. The lack of difference is due to the low number of hospitals that have historically selected those eCQMs as part of their 4 required eCQMs for submission. Because the alternatives considered do not impact the collection of information for hospitals, we do

not expect these alternatives to affect the reporting burden on hospitals associated with the Hospital IQR Program. We considered these alternatives and sought public comment on them.

As discussed in section IV.I.4.b. of the preamble of the proposed rule, in the context of scoring hospitals for purposes of the Hospital VBP Program for the FY 2021 program year and subsequent years, we analyzed two domain weighting options based on our proposals to remove 10 measures and the Safety domain from the Hospital VBP Program. As an alternative to our proposal to weight the three remaining domains as Clinical Outcomes domain (proposed name change) – 50 percent; Person and Community Engagement domain – 25 percent; and Efficiency and Cost Reduction domain – 25 percent, we considered weighting each of the three remaining domains equally, meaning each of the three domains would be weighted as one-third of a hospital's Total Performance Score (TPS), beginning with the FY 2021 program year. As discussed in section IV.I.4.b. of the preamble of the proposed rule, we also considered keeping the current domain weighting (25 percent for each of the four domains – Safety, Clinical Outcomes (proposed name change), Person and Community Engagement, and Efficiency and Cost Reduction – with proportionate reweighting if a hospital has sufficient data on only three domains), which would require keeping at least one or more of the measures in the Safety domain and the Safety domain itself. As discussed in sections IV.I.4.a.(2) and IV.I.4.b. of the preamble of this final rule, we are not finalizing our proposal to remove the Safety domain and are keeping the current domain weighting described above, as previously finalized.

As summarized in section IV.I.4.b. of the preambles of the proposed rule and this final rule, to understand the potential impacts of the proposed domain weighting on hospitals' TPSs, we conducted analyses using FY 2018 program data that estimated the potential impacts of our proposed domain weighting policy to increase the weight of the Clinical Outcomes domain from 25 percent to 50 percent of a hospital's TPS and an alternative weighting policy we considered of equal weights whereby each domain would constitute one-third (1/3) of a hospital's TPS. In the proposed rule (83 FR 20537), we provided a table showing the estimated average TPSs and unweighted domain scores under these alternatives. That table is set out below and provides an overview of the estimated impact on hospitals' TPS by certain hospital characteristics and as they would compare to actual FY 2018 TPSs, which include scoring on four domains, including the Safety domain, and applying proportionate reweighting if a hospital has sufficient data on only three domains.

<b>Comparison of Estimated Average TPSs and Unweighted Domain Scores*</b>						
<b>Hospital Characteristic</b>	<b>Actual FY 2018 Average Clinical Care Domain Score</b>	<b>Actual FY 2018 Average Person and Community Engagement Domain Score</b>	<b>Actual FY 2018 Average Efficiency and Cost Reduction Domain Score</b>	<b>Actual FY 2018 Average TPS (4 domains) +</b>	<b>Proposed Increased Weighting of Clinical Care Domain: Estimated Average TPS</b>	<b>Alternative Weighting: Estimated Average TPS</b>
All Hospitals**	43.2	33.5	18.8	<b>37.4</b>	<b>34.6</b>	<b>31.8</b>
Bed Size						
1-99	33.4	46.0	35.7	<b>44.6</b>	<b>37.2</b>	<b>38.4</b>
100-199	42.2	34.5	21.0	<b>39.2</b>	<b>35.0</b>	<b>32.6</b>
200-299	44.5	27.9	12.9	<b>34.4</b>	<b>32.4</b>	<b>28.4</b>
300-399	48.2	27.3	10.0	<b>33.3</b>	<b>33.4</b>	<b>28.5</b>
400+	50.9	26.9	7.6	<b>31.9</b>	<b>34.1</b>	<b>28.5</b>
Geographic Location						
Urban	46.8	30.7	13.7	<b>35.7</b>	<b>34.5</b>	<b>30.4</b>
Rural	33.7	40.5	31.7	<b>41.9</b>	<b>34.9</b>	<b>35.3</b>
Safety Net Status***						
Non-Safety Net	42.7	35.4	19.0	<b>37.9</b>	<b>34.9</b>	<b>32.4</b>
Safety Net	45.1	25.7	18.1	<b>35.6</b>	<b>33.5</b>	<b>29.6</b>
Teaching Status						
Non-Teaching	39.9	36.7	22.9	<b>39.4</b>	<b>34.9</b>	<b>33.2</b>
Teaching	48.7	27.9	11.8	<b>34.1</b>	<b>34.3</b>	<b>29.5</b>

\* Analysis based on FY 2018 Hospital VBP Program data.

\*\* Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the state of Maryland) were removed from this analysis.

+ Based on current policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

\*\*\* For purposes of this analysis, ‘safety net’ status is defined as those hospitals with top 10 percentile of Disproportionate Share Hospital (DSH) patient percentage from the FY 2018 IPPS/LTCH PPS final rule impact file: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>.

The table below provides a summary of the estimated impacts on average TPSs and payment adjustments for all hospitals,<sup>432</sup> including as they would compare to actual FY 2018 program results under current domain weighting policies.

<b>Summary of Estimated Impacts on Average TPS and Payment Adjustments Using FY 2018 Program Data</b>	<b>Actual (4 domains)<sup>+</sup></b>	<b>Proposed Increased Weight for Clinical Outcomes (3 domains)</b>	<b>Equal Weighting Alternative (3 domains)</b>
Total number of hospitals with a payment adjustment	2,808	2,701	2,701
Number of hospitals receiving a positive payment adjustment (percent)	1,597 (57 percent)	1,209 (45 percent)	1,337 (50 percent)
Average positive payment adjustment percentage	0.60 percent	0.58 percent	0.70 percent
Estimated average positive payment adjustment	\$128,161	\$233,620	\$204,038
Number of hospitals receiving a negative payment adjustment (percent)	1,211 (43 percent)	1,492 (55 percent)	1,364 (50 percent)
Average negative payment adjustment percentage	-0.41 percent	-0.60 percent	-0.57 percent
Estimated average negative payment adjustment	\$169,011	\$189,307	\$200,000
Number of hospitals receiving a positive payment adjustment with a composite quality score* below the median (percent)	341 (21 percent)	134 (11 percent)	266 (20 percent)
Average TPS	37.4	34.6	31.8
Lowest TPS receiving a positive payment adjustment	34.6	35.9	30.9
Slope of the linear exchange function	2.8908851882	2.7849297316	3.2405954322

<sup>+</sup> Based on current policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

<sup>432</sup> Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the state of Maryland) were removed from this analysis.

\* “Composite quality score” is defined as a hospital’s TPS minus the hospital’s weighted Efficiency and Cost Reduction domain score.

We also refer readers to section I.H.6.b. of Appendix A to the proposed rule (83 FR 20620 through 20621) for a detailed discussion regarding the estimated impacts of the proposed domain weighting and equal weighting alternative on hospital percentage payment adjustments. Because the alternatives considered did not impact the collection of information for hospitals, we did not expect these alternatives to affect the reporting burden on hospitals. We considered these alternatives and sought public comment on them.

As discussed in section IV.J.5. of the preamble of this final rule, in the context of scoring hospitals for the purposes of the HAC Reduction Program, we analyzed two alternative scoring options to the current methodology for the FY 2020 program year and subsequent years. The alternative scoring methodologies considered were an Equal Measure Weights methodology, which would remove the domains and assign equal weight to each measure for which a hospital has a score, and a Variable Domain Weighting methodology, which would vary the weighting of Domain 1 and 2 based on the number of measures in each domain. We considered these alternative approaches to allow the HAC Reduction Program to continue to fairly assess all hospitals’ performance under the Program.

We simulated results under each scoring approach using FY 2019 HAC Reduction Program data.<sup>433</sup> We compared the percentage of hospitals in the worst-performing quartile in FY 2019 to the percentage that would be in the worst-performing quartile under each scoring approach. The table below provides a high-level overview of the estimated impact of these approaches on several key groups of hospitals.

**Estimated Impact of Scoring Approaches on Percentage of Hospitals in Worst-Performing Quartile by Hospital Group**

<b>Hospital Group<sup>a</sup></b>	<b>Equal Measure Weights</b>	<b>Variable Domain Weights</b>
Teaching hospitals: 100 or more residents (N=248)	3.6%	1.6%
Safety-net <sup>b</sup> (N=646)	0.9%	0.8%
Urban hospitals: 400 or more beds (N=358)	2.5%	0.8%
Hospitals with fewer than 100 beds (N=1,208)	-1.7%	-1.0%
Hospitals with a measure score for:	.	.
Zero Domain 2 measures (N=223)	0.4%	0.0%
One Domain 2 measure (N=340)	-4.1%	-2.9%
Two Domain 2 measures (N=211)	-3.8%	-3.3%
Three Domain 2 measures (N=188)	-0.5%	0.5%
Four Domain 2 measures (N=253)	0.0%	0.4%
Five Domain 2 measures (N=2,004)	1.1%	0.7%

<sup>a</sup> The number of hospitals in the given hospital group for FY 2019 is specified in parenthesis in this column (for example, N=248).

<sup>b</sup> Hospitals are considered safety-net hospitals if they are in the top quintile for DSH percent.

Note: This table is updated from the FY 2019 IPPS/LTCH PPS proposed rule, which used FY 2018 data. To see that table, we refer readers to 83 FR 20434 through 20437; 83 FR 20638 through 20639.

As shown in the table above, the Equal Measure Weights approach generally has a larger impact than the Variable Domain Weights approach. Under the Equal Measure

<sup>433</sup> In the FY 2019 IPPS/LTCH PPS proposed rule, we used FY 2018 data to complete the analysis. We have since updated our analysis using FY 2019 data. To see prior table, we refer readers to 83 FR 20434 through 20437; 83 FR 20638 through 20639.

Weights approach, as compared to the current methodology using FY 2019 HAC Reduction Program data, the percentage of hospitals in the worst-performing quartile decreases by 1.7 percent for small hospitals (that is, fewer than 100 beds), 4.1 percent for hospitals with one Domain 2 measure, 3.8 percent for hospitals with two Domain 2 measures, while it increases by 2.5 percent for large urban hospitals (that is, 400 or more beds) and 3.6 percent for large teaching hospitals (that is, 100 or more residents). The Variable Domain Weights approach decreases the percentage of hospitals in the worst-performing quartile by 1.0 percent for small hospitals, 2.9 percent for hospitals with one Domain 2 measure, and 3.3 for hospitals with two Domain 2 measures, while it increases the percentage of hospitals in the worst-performing quartile by 0.8 percent for large urban hospitals and 1.6 percent for large teaching hospitals.

To understand the potential impacts of these alternatives on hospitals' Total HAC Reduction Program Penalty Amount, we conducted an analysis that estimated the potential impacts of these alternatives using FY 2017 payment data annualized by a factor to estimate in FY 2019 payment dollars. Based on this analysis, we expect that aggregate penalty amounts would slightly increase under both alternative methodologies proposed in the proposed rule. We also expect an increase in the penalty amount under both methodologies because some larger hospitals may move into the worst-performing quartile and smaller hospitals may move out of the worst-performing quartile. Because the 1-percent penalty applies uniformly to hospitals in the worst-performing quartile, we anticipate that overall program penalties would rise slightly if larger hospitals move into the penalty quartile. The alternative weighting approach considered, variable weighting,

would have increased estimated total penalties by approximately \$11,125,845. The finalized weighting approach will increase estimated total penalties by \$20,159,043, over \$9 million more than the alternative weighting approach considered. The table below displays the results of our analysis in FY 2019 dollars and as a percentage difference.

**Estimated Fiscal Impact of Finalized and Alternative Weighting Approaches  
Relative to Current Methodology\*\***

<b>Scenario</b>	<b>Total HAC Reduction Program Penalty Amount (FY 2019 Dollars)*</b>	<b>Percentage Difference from FY 2019</b>	<b>Difference from FY 2019 (FY 2019 Dollars)*</b>
FY 2019 HAC Reduction Program – Before Proposed Weighting Change	\$380,999,808	N/A	N/A
Variable Domain Weights	\$392,125,653	2.9%	<b>\$11,125,845</b>
Equal Measure Weights	\$401,158,851	5.3%	<b>\$20,159,043</b>

\*Applied an annual increase to DRG payments to convert estimated FY 2017 DRG payments to estimated FY 2019 DRG payments. Source: Payment estimates based on FY 2017 Medicare Provider Analysis and Review (MedPAR) files.

\*\* In the FY 2019 IPPS/LTCH PPS proposed rule, we used FY 2018 Program data and FY 2013 payment to complete the analysis. We have since updated our analysis using FY 2019 Program data and FY 2017 payment data. To see that table, we refer readers to 83 FR 20638 through 20639.

In the proposed rule, after consideration of the current policy, Equal Measure Weights and Variable Domain Weighting methodologies, we sought public comment on these approaches. In this final rule, after consideration of the public comments we received, we are adopting the Equal Measure Weights methodology. However, because the alternatives considered do not impact the collection of information for hospitals, we did not expect either of these alternatives to affect the reporting burden on hospitals associated with the HAC Reduction Program. Therefore, we believe that the finalized policy will not affect burden.

P. Reducing Regulation and Controlling Regulatory Costs

Executive Order 13771, titled Reducing Regulation and Controlling Regulatory Costs, was issued on January 30, 2017. This final rule, is considered an E.O. 13771 deregulatory action. We estimate that this rule generates \$72 million in annualized cost savings, discounted at 7 percent relative to fiscal year 2016, over a perpetual time horizon. We discuss the estimated burden and cost reductions for the Hospital IQR Program in section XIV.B.3. of the preamble of this final rule, and estimate that the impact of these changes is a reduction in costs of approximately \$21,585 per hospital annually or approximately \$71,233,624 for all hospitals annually. We note that in section VIII.A.5.c.(1). of the preamble of this final rule, we are finalizing our proposal to remove the hospital-acquired infection (HAI) measures from the Hospital IQR Program and, therefore, discontinue validation of these measures under the Hospital IQR Program. However, these measures will remain in the HAC Reduction Program and, therefore, we are finalizing our proposal to begin validation of these measures under the HAC Reduction Program using the same processes and information collection requirements previously used under the Hospital IQR Program. As a result, the net costs reflected in the table below for the HAC Reduction Program do not constitute a new information collection requirement on participating hospitals, but a transition of the HAI measure validation process from one program to another based on our efforts to reduce measure duplication across programs. We discuss the estimated burden and cost impacts for the finalized transition of HAI data validation from the Hospital IQR Program to the HAC Reduction Program in section XIV.B.7. of the preamble of this final rule. We discuss the

estimated burden and cost reductions for the PCHQR Program in section XIV.B.4. of the preamble of this final rule, and estimate that the impact of these proposed changes is a reduction in costs of approximately \$92,145 per PCH annually or approximately \$1,013,595 for all participating PCHs annually. We discuss the estimated burden and cost reductions for the proposed LTCH QRP measure removals in section XIV.B.6. of the preamble of this final rule, and estimate that the impact of these proposed changes is a reduction in costs of approximately \$1,148 per LTCH annually or approximately \$482,469 for all LTCHs annually. Also, as noted in section I.R. of this Appendix, the regulatory review cost for this final rule is \$8,809,182.

<b>Section of the Proposed Rule</b>	<b>Description</b>	<b>Amount of Costs or Savings</b>
Section XIV.B.3. of the preamble	ICRs for the Hospital IQR Program	(\$71,233,624)
Section XIV.B.4. of the preamble	ICRs for the PCHQR Program	(\$1,013,595)
Section XIV.B.6. of the preamble	ICRs for the LTCH QRP	(\$482,469)
Section XIV.B.7. of the preamble	ICRs for the HAC Reduction Program*	\$1,580,256
<b>Total</b>		<b>(\$72 million)</b>

\*We note that the net costs reflected in this table for the HAC Reduction Program do not constitute a new information collection requirement on participating hospitals, but a transition of the HAI measure validation process from one program to another based on our efforts to reduce measure duplication across programs.

Q. Overall Conclusion

1. Acute Care Hospitals

Acute care hospitals are estimated to experience an increase of approximately \$4.8 billion in FY 2019, taking into account operating, capital, new technology, and low volume hospital payments as modeled for this final rule. Approximately \$4.4 billion of this estimated increase is due to the changes in operating payments, including \$1.5 billion in uncompensated care payments (discussed in sections I.G. and I.H. of this Appendix), approximately \$0.2 billion is due to the change in capital payments (discussed in section

I.I of this Appendix), approximately \$0.2 billion is due to the change in new technology add-on payments (discussed in section I.H of this Appendix), and approximately \$0.1 billion is due to the change in low-volume hospital payments (discussed in section I.H of this Appendix). Total differs from the sum of the components due to rounding.

Table I of section I.G. of this Appendix also demonstrates the estimated redistributive impacts of the IPPS budget neutrality requirements for the MS-DRG and wage index changes, and for the wage index reclassifications under the MGCRB.

We estimate that hospitals will experience a 2.3 percent increase in capital payments per case, as shown in Table III of section I.I. of this Appendix. We project that there will be a \$193 million increase in capital payments in FY 2019 compared to FY 2018.

The discussions presented in the previous pages, in combination with the remainder of this final rule, constitute a regulatory impact analysis.

## 2. LTCHs

Overall, LTCHs are projected to experience an increase in estimated payments per discharge in FY 2019. In the impact analysis, we are using the rates, factors, and policies presented in this final rule based on the best available claims and CCR data to estimate the change in payments under the LTCH PPS for FY 2019. Accordingly, based on the best available data for the 417 LTCHs in our database, we estimate that overall FY 2019 LTCH PPS payments will increase approximately \$39 million relative to FY 2018 as a result of the payment rates and factors presented in this final rule.

## R. Regulatory Review Costs

If regulations impose administrative costs on private entities, such as the time needed to read and interpret a rule, we should estimate the cost associated with regulatory review. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20640), due to the uncertainty involved with accurately quantifying the number of entities that would review the proposed rule, we assumed that the total number of timely pieces of correspondence on last year's proposed rule would be the number of reviewers of the proposed rule. We acknowledged that this assumption may understate or overstate the costs of reviewing the rule. It is possible that not all commenters reviewed last year's rule in detail, and it is also possible that some reviewers chose not to comment on the proposed rule. For those reasons, and consistent with our approach in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38585), we believe that the number of past commenters would be a fair estimate of the number of reviewers of the proposed rule. We welcomed any public comments on the approach in estimating the number of entities that will review this final rule. We did not receive any public comments specific to our solicitation.

We also recognized that different types of entities are in many cases affected by mutually exclusive sections of the proposed rule. Therefore, for the purposes of our estimate, and consistent with our approach in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38585), we assumed that each reviewer read approximately 50 percent of the proposed rule. We welcomed public comments on this assumption. We did not receive any public comments specific to our solicitation.

We have used the number of timely pieces of correspondence on the FY 2019 proposed rule as our estimate for the number of reviewers of this final rule. We continue

to acknowledge the uncertainty involved with using this number, but we believe it is a fair estimate due to the variety of entities affected and the likelihood that some of them choose to rely (in full or in part) on press releases, newsletters, fact sheets, or other sources rather than the comprehensive review of preamble and regulatory text. Using the wage information from the BLS for medical and health service managers (Code 11-9111), we estimate that the cost of reviewing the proposed rule is \$105.16 per hour, including overhead and fringe benefits ([https://www.bls.gov/oes/current/oes\\_nat.htm](https://www.bls.gov/oes/current/oes_nat.htm)). Assuming an average reading speed, we estimate that it would take approximately 19 hours for the staff to review half of this final rule. For each IPPS hospital or LTCH that reviews this final rule, the estimated cost is \$1,998 (19 hours x \$105.16). Therefore, we estimate that the total cost of reviewing this final rule is \$8,809,182 (\$1,998 x 4,409 reviewers).

## **II. Accounting Statements and Tables**

### A. Acute Care Hospitals

As required by OMB Circular A-4 (available at [https://obamawhitehouse.archives.gov/omb/circulars\\_a-004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a-004_a-4/) and <https://georgewbush-whitehouse.archives.gov/omb/circulars/a004/a-4.html>), in the following Table V., we have prepared an accounting statement showing the classification of the expenditures associated with the provisions of this final rule as they relate to acute care hospitals. This table provides our best estimate of the change in Medicare payments to providers as a result of the proposed changes to the IPPS presented in this final rule. All expenditures are classified as transfers to Medicare providers.

As shown below in Table V., the net costs to the Federal Government associated with the policies in this final rule are estimated at \$4.8 billion.

**TABLE V.—ACCOUNTING STATEMENT: CLASSIFICATION OF ESTIMATED EXPENDITURES UNDER THE IPSS FROM FY 2018 TO FY 2019**

<b>Category</b>	<b>Transfers</b>
Annualized Monetized Transfers	\$4.8 billion
From Whom to Whom	Federal Government to IPSS Medicare Providers

**B. LTCHs**

As discussed in section I.J. of this Appendix, the impact analysis of the payment rates and factors presented in this final rule under the LTCH PPS is projected to result in an increase in estimated aggregate LTCH PPS payments in FY 2019 relative to FY 2018 of approximately \$39 million based on the data for 417 LTCHs in our database that are subject to payment under the LTCH PPS. Therefore, as required by OMB Circular A-4 (available at [https://obamawhitehouse.archives.gov/omb/circulars\\_a004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/) and <https://georgewbush-whitehouse.archives.gov/omb/circulars/a004/a-4.html>), in Table VI., we have prepared an accounting statement showing the classification of the expenditures associated with the provisions of this final rule as they relate to the changes to the LTCH PPS. Table VI. provides our best estimate of the estimated change in Medicare payments under the LTCH PPS as a result of the payment rates and factors and other provisions presented in this final rule based on the data for the 417 LTCHs in our database. All expenditures are classified as transfers to Medicare providers (that is, LTCHs).

As shown in Table VI. below, the net cost to the Federal Government associated with the policies for LTCHs in this final rule are estimated at \$39 million.

**TABLE VI.—ACCOUNTING STATEMENT: CLASSIFICATION OF ESTIMATED EXPENDITURES FROM THE FY 2018 LTCH PPS TO THE FY 2019 LTCH PPS**

<b>Category</b>	<b>Transfers</b>
Annualized Monetized Transfers	\$39 million
From Whom to Whom	Federal Government to LTCH Medicare Providers

**III. Regulatory Flexibility Act (RFA) Analysis**

The RFA requires agencies to analyze options for regulatory relief of small entities. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and small government jurisdictions. We estimate that most hospitals and most other providers and suppliers are small entities as that term is used in the RFA. The great majority of hospitals and most other health care providers and suppliers are small entities, either by being nonprofit organizations or by meeting the SBA definition of a small business (having revenues of less than \$7.5 million to \$38.5 million in any 1 year). (For details on the latest standards for health care providers, we refer readers to page 36 of the Table of Small Business Size Standards for NAIC 622 found on the SBA website at: [http://www.sba.gov/sites/default/files/files/Size\\_Standards\\_Table.pdf](http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf).)

For purposes of the RFA, all hospitals and other providers and suppliers are considered to be small entities. Individuals and States are not included in the definition of a small entity. We believe that the provisions of this final rule relating to acute care hospitals will have a significant impact on small entities as explained in this Appendix. For example, because all hospitals are considered to be small entities for purposes of the RFA, the hospital impacts described in this final rule are impacts on small entities. For example, we refer readers to “Table I.—Impact Analysis of Changes to the IPPS for

Operating Costs for FY 2019.” Because we lack data on individual hospital receipts, we cannot determine the number of small proprietary LTCHs. Therefore, we are assuming that all LTCHs are considered small entities for the purpose of the analysis in section I.J. of this Appendix. MACs are not considered to be small entities because they do not meet the SBA definition of a small business. Because we acknowledge that many of the affected entities are small entities, the analysis discussed throughout the preamble of this final rule constitutes our regulatory flexibility analysis. This final rule contains a range of policies. It provides descriptions of the statutory provisions that are addressed, identifies the finalized policies, and presents rationales for our decisions and, where relevant, alternatives that were considered.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20640), we solicited public comments on our estimates and analysis of the impact of our proposals on those small entities. Any public comments that we received and our responses are presented throughout this final rule.

#### **IV. Impact on Small Rural Hospitals**

Section 1102(b) of the Social Security Act requires us to prepare a regulatory impact analysis for any proposed or final rule that may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 of the RFA. With the exception of hospitals located in certain New England counties, for purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of an urban area and has fewer than 100 beds. Section 601(g) of the Social Security Amendments of 1983

(Pub. L. 98-21) designated hospitals in certain New England counties as belonging to the adjacent urban area. Thus, for purposes of the IPPS and the LTCH PPS, we continue to classify these hospitals as urban hospitals. (We refer readers to Table I in section I.G. of this Appendix for the quantitative effects of the policy changes under the IPPS for operating costs.)

#### **V. Unfunded Mandates Reform Act Analysis**

Section 202 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) also requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates require spending in any 1 year of \$100 million in 1995 dollars, updated annually for inflation. In 2019, that threshold level is approximately \$146 million. This final rule would not mandate any requirements for State, local, or tribal governments, nor would it affect private sector costs.

#### **VI. Executive Order 13175**

Executive Order 13175 directs agencies to consult with Tribal officials prior to the formal promulgation of regulations having tribal implications. This final rule contains provisions applicable to hospitals and facilities operated by the Indian Health Service or Tribes or Tribal organizations under the Indian Self-Determination and Education Assistance Act and, thus, has tribal implications. Therefore, in accordance with Executive Order 13175 and the CMS Tribal Consultation Policy (December 2015), CMS has consulted with Tribal officials on these Indian-specific provisions of the proposed rule prior to the formal promulgation of this rule.

**VII. Executive Order 12866**

In accordance with the provisions of Executive Order 12866, the Executive Office of Management and Budget reviewed this final rule.

<b>Comparison of Estimated Average TPSs and Unweighted Domain Scores*</b>						
<b>Hospital Characteristic</b>	<b>Actual FY 2018 Average Clinical Care Domain Score</b>	<b>Actual FY 2018 Average Person and Community Engagement Domain Score</b>	<b>Actual FY 2018 Average Efficiency and Cost Reduction Domain Score</b>	<b>Actual FY 2018 Average TPS (4 domains) +</b>	<b>Proposed Increased Weighting of Clinical Care Domain: Estimated Average TPS</b>	<b>Alternative Weighting: Estimated Average TPS</b>
All Hospitals**	43.2	33.5	18.8	<b>37.4</b>	<b>34.6</b>	<b>31.8</b>
Bed Size						
1-99	33.4	46.0	35.7	<b>44.6</b>	<b>37.2</b>	<b>38.4</b>
100-199	42.2	34.5	21.0	<b>39.2</b>	<b>35.0</b>	<b>32.6</b>
200-299	44.5	27.9	12.9	<b>34.4</b>	<b>32.4</b>	<b>28.4</b>
300-399	48.2	27.3	10.0	<b>33.3</b>	<b>33.4</b>	<b>28.5</b>
400+	50.9	26.9	7.6	<b>31.9</b>	<b>34.1</b>	<b>28.5</b>
Geographic Location						
Urban	46.8	30.7	13.7	<b>35.7</b>	<b>34.5</b>	<b>30.4</b>
Rural	33.7	40.5	31.7	<b>41.9</b>	<b>34.9</b>	<b>35.3</b>
Safety Net Status***						
Non-Safety Net	42.7	35.4	19.0	<b>37.9</b>	<b>34.9</b>	<b>32.4</b>
Safety Net	45.1	25.7	18.1	<b>35.6</b>	<b>33.5</b>	<b>29.6</b>
Teaching Status						
Non-Teaching	39.9	36.7	22.9	<b>39.4</b>	<b>34.9</b>	<b>33.2</b>
Teaching	48.7	27.9	11.8	<b>34.1</b>	<b>34.3</b>	<b>29.5</b>

\* Analysis based on FY 2018 Hospital VBP Program data.

\*\* Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the state of Maryland) were removed from this analysis.

+ Based on current policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

\*\*\* For purposes of this analysis, ‘safety net’ status is defined as those hospitals with top 10 percentile of Disproportionate Share Hospital (DSH) patient percentage from the FY 2018 IPPS/LTCH PPS final rule impact file: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page-Items/FY2018-IPPS-Final-Rule-Data-Files.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending>.

The table below provides a summary of the estimated impacts on average TPSs and payment adjustments for all hospitals,<sup>434</sup> including as they would compare to actual FY 2018 program results under current domain weighting policies.

<b>Summary of Estimated Impacts on Average TPS and Payment Adjustments Using FY 2018 Program Data</b>	<b>Actual (4 domains)<sup>+</sup></b>	<b>Proposed Increased Weight for Clinical Outcomes (3 domains)</b>	<b>Equal Weighting Alternative (3 domains)</b>
Total number of hospitals with a payment adjustment	2,808	2,701	2,701
Number of hospitals receiving a positive payment adjustment (percent)	1,597 (57 percent)	1,209 (45 percent)	1,337 (50 percent)
Average positive payment adjustment percentage	0.60 percent	0.58 percent	0.70 percent
Estimated average positive payment adjustment	\$128,161	\$233,620	\$204,038
Number of hospitals receiving a negative payment adjustment (percent)	1,211 (43 percent)	1,492 (55 percent)	1,364 (50 percent)
Average negative payment adjustment percentage	-0.41 percent	-0.60 percent	-0.57 percent
Estimated average negative payment adjustment	\$169,011	\$189,307	\$200,000
Number of hospitals receiving a positive payment adjustment with a composite quality score* below the median (percent)	341 (21 percent)	134 (11 percent)	266 (20 percent)
Average TPS	37.4	34.6	31.8
Lowest TPS receiving a positive payment adjustment	34.6	35.9	30.9
Slope of the linear exchange function	2.8908851882	2.7849297316	3.2405954322

<sup>+</sup> Based on current policies, which includes the Safety domain, and proportionate reweighting for hospitals with sufficient data on only three domains.

<sup>434</sup> Only eligible hospitals are included in this analysis. Excluded hospitals (for example, hospitals not meeting the minimum domains required for calculation, hospitals receiving three or more immediate jeopardy citations in the FY 2018 performance period, hospitals subject to payment reductions under the Hospital IQR Program in FY 2018, and hospitals located in the state of Maryland) were removed from this analysis.

\* “Composite quality score” is defined as a hospital’s TPS minus the hospital’s weighted Efficiency and Cost Reduction domain score.

We also refer readers to section I.H.6.b. of Appendix A to the proposed rule (83 FR 20620 through 20621) for a detailed discussion regarding the estimated impacts of the proposed domain weighting and equal weighting alternative on hospital percentage payment adjustments. Because the alternatives considered did not impact the collection of information for hospitals, we did not expect these alternatives to affect the reporting burden on hospitals. We considered these alternatives and sought public comment on them.

As discussed in section IV.J.5. of the preamble of this final rule, in the context of scoring hospitals for the purposes of the HAC Reduction Program, we analyzed two alternative scoring options to the current methodology for the FY 2020 program year and subsequent years. The alternative scoring methodologies considered were an Equal Measure Weights methodology, which would remove the domains and assign equal weight to each measure for which a hospital has a score, and a Variable Domain Weighting methodology, which would vary the weighting of Domain 1 and 2 based on the number of measures in each domain. We considered these alternative approaches to allow the HAC Reduction Program to continue to fairly assess all hospitals’ performance under the Program.

We simulated results under each scoring approach using FY 2019 HAC Reduction Program data.<sup>435</sup> We compared the percentage of hospitals in the worst-performing quartile in FY 2019 to the percentage that would be in the worst-performing quartile under each scoring approach. The table below provides a high-level overview of the estimated impact of these approaches on several key groups of hospitals.

**Estimated Impact of Scoring Approaches on Percentage of Hospitals in Worst-Performing Quartile by Hospital Group**

<b>Hospital Group<sup>a</sup></b>	<b>Equal Measure Weights</b>	<b>Variable Domain Weights</b>
Teaching hospitals: 100 or more residents (N=248)	3.6%	1.6%
Safety-net <sup>b</sup> (N=646)	0.9%	0.8%
Urban hospitals: 400 or more beds (N=358)	2.5%	0.8%
Hospitals with fewer than 100 beds (N=1,208)	-1.7%	-1.0%
Hospitals with a measure score for:	.	.
Zero Domain 2 measures (N=223)	0.4%	0.0%
One Domain 2 measure (N=340)	-4.1%	-2.9%
Two Domain 2 measures (N=211)	-3.8%	-3.3%
Three Domain 2 measures (N=188)	-0.5%	0.5%
Four Domain 2 measures (N=253)	0.0%	0.4%
Five Domain 2 measures (N=2,004)	1.1%	0.7%

<sup>a</sup> The number of hospitals in the given hospital group for FY 2019 is specified in parenthesis in this column (for example, N=248).

<sup>b</sup> Hospitals are considered safety-net hospitals if they are in the top quintile for DSH percent. This table is updated from the FY 2019 IPPS/LTCH PPS proposed rule, which used FY 2018 data. To see that table, we refer readers to 83 FR 20434 through 20437; 83 FR 20638 through 20639.

As shown in the table above, the Equal Measure Weights approach generally has a larger impact than the Variable Domain Weights approach. Under the Equal Measure

<sup>435</sup> In the FY 2019 IPPS/LTCH PPS proposed rule, we used FY 2018 data to complete the analysis. We have since updated our analysis using FY 2019 data. To see prior table, we refer readers to 83 FR 20434 through 20437; 83 FR 20638 through 20639.

Weights approach, as compared to the current methodology using FY 2019 HAC Reduction Program data, the percentage of hospitals in the worst-performing quartile decreases by 1.7 percent for small hospitals (that is, fewer than 100 beds), 4.1 percent for hospitals with one Domain 2 measure, 3.8 percent for hospitals with two Domain 2 measures, while it increases by 2.5 percent for large urban hospitals (that is, 400 or more beds) and 3.6 percent for large teaching hospitals (that is, 100 or more residents). The Variable Domain Weights approach decreases the percentage of hospitals in the worst-performing quartile by 1.0 percent for small hospitals, 2.9 percent for hospitals with one Domain 2 measure, and 3.3 for hospitals with two Domain 2 measures, while it increases the percentage of hospitals in the worst-performing quartile by 0.8 percent for large urban hospitals and 1.6 percent for large teaching hospitals.

To understand the potential impacts of these alternatives on hospitals' Total HAC Reduction Program Penalty Amount, we conducted an analysis that estimated the potential impacts of these alternatives using FY 2017 payment data annualized by a factor to estimate in FY 2019 payment dollars. Based on this analysis, we expect that aggregate penalty amounts would slightly increase under both alternative methodologies proposed in the proposed rule. We also expect an increase in the penalty amount under both methodologies because some larger hospitals may move into the worst-performing quartile and smaller hospitals may move out of the worst-performing quartile. Because the 1-percent penalty applies uniformly to hospitals in the worst-performing quartile, we anticipate that overall program penalties would rise slightly if larger hospitals move into the penalty quartile. The alternative weighting approach considered, variable weighting,

would have increased estimated total penalties by approximately \$11,125,845. The finalized weighting approach will increase estimated total penalties by \$20,159,043, over \$9 million more than the alternative weighting approach considered. The table below displays the results of our analysis in FY 2019 dollars and as a percentage difference.

**Estimated Fiscal Impact of Finalized and Alternative Weighting Approaches  
Relative to Current Methodology\*\***

<b>Scenario</b>	<b>Total HAC Reduction Program Penalty Amount (FY 2019 Dollars)*</b>	<b>Percentage Difference from FY 2019</b>	<b>Difference from FY 2019 (FY 2019 Dollars)*</b>
FY 2019 HAC Reduction Program – Before Proposed Weighting Change	\$380,999,808	N/A	N/A
Variable Domain Weights	\$392,125,653	2.9%	<b>\$11,125,845</b>
Equal Measure Weights	\$401,158,851	5.3%	<b>\$20,159,043</b>

\*Applied an annual increase to DRG payments to convert estimated FY 2017 DRG payments to estimated FY 2019 DRG payments. Source: Payment estimates based on FY 2017 Medicare Provider Analysis and Review (MedPAR) files.

\*\* In the FY 2019 IPPS/LTCH PPS proposed rule, we used FY 2018 Program data and FY 2013 payment to complete the analysis. We have since updated our analysis using FY 2019 Program data and FY 2017 payment data. To see that table, we refer readers to 83 FR 20638 through 20639.

In the proposed rule, after consideration of the current policy, Equal Measure Weights and Variable Domain Weighting methodologies, we sought public comment on these approaches. In this final rule, after consideration of the public comments we received, we are adopting the Equal Measure Weights methodology. However, because the alternatives considered do not impact the collection of information for hospitals, we did not expect either of these alternatives to affect the reporting burden on hospitals associated with the HAC Reduction Program. Therefore, we believe that the finalized policy will not affect burden.

P. Reducing Regulation and Controlling Regulatory Costs

Executive Order 13771, titled Reducing Regulation and Controlling Regulatory Costs, was issued on January 30, 2017. This final rule, is considered an E.O. 13771 deregulatory action. We estimate that this rule generates \$72 million in annualized cost savings, discounted at 7 percent relative to fiscal year 2016, over a perpetual time horizon. We discuss the estimated burden and cost reductions for the Hospital IQR Program in section XIV.B.3. of the preamble of this final rule, and estimate that the impact of these changes is a reduction in costs of approximately \$21,585 per hospital annually or approximately \$71,233,624 for all hospitals annually. We note that in section VIII.A.5.c.(1). of the preamble of this final rule, we are finalizing our proposal to remove the hospital-acquired infection (HAI) measures from the Hospital IQR Program and, therefore, discontinue validation of these measures under the Hospital IQR Program. However, these measures will remain in the HAC Reduction Program and, therefore, we are finalizing our proposal to begin validation of these measures under the HAC Reduction Program using the same processes and information collection requirements previously used under the Hospital IQR Program. As a result, the net costs reflected in the table below for the HAC Reduction Program do not constitute a new information collection requirement on participating hospitals, but a transition of the HAI measure validation process from one program to another based on our efforts to reduce measure duplication across programs. We discuss the estimated burden and cost impacts for the finalized transition of HAI data validation from the Hospital IQR Program to the HAC Reduction Program in section XIV.B.7. of the preamble of this final rule. We discuss the

estimated burden and cost reductions for the PCHQR Program in section XIV.B.4. of the preamble of this final rule, and estimate that the impact of these proposed changes is a reduction in costs of approximately \$92,145 per PCH annually or approximately \$1,013,595 for all participating PCHs annually. We discuss the estimated burden and cost reductions for the proposed LTCH QRP measure removals in section XIV.B.6. of the preamble of this final rule, and estimate that the impact of these proposed changes is a reduction in costs of approximately \$1,148 per LTCH annually or approximately \$482,469 for all LTCHs annually. Also, as noted in section I.R. of this Appendix, the regulatory review cost for this final rule is \$8,809,182.

<b>Section of the Proposed Rule</b>	<b>Description</b>	<b>Amount of Costs or Savings</b>
Section XIV.B.3. of the preamble	ICRs for the Hospital IQR Program	(\$71,233,624)
Section XIV.B.4. of the preamble	ICRs for the PCHQR Program	(\$1,013,595)
Section XIV.B.6. of the preamble	ICRs for the LTCH QRP	(\$482,469)
Section XIV.B.7. of the preamble	ICRs for the HAC Reduction Program*	\$1,580,256
<b>Total</b>		<b>(\$72 million)</b>

\*We note that the net costs reflected in this table for the HAC Reduction Program do not constitute a new information collection requirement on participating hospitals, but a transition of the HAI measure validation process from one program to another based on our efforts to reduce measure duplication across programs.

Q. Overall Conclusion

1. Acute Care Hospitals

Acute care hospitals are estimated to experience an increase of approximately \$4.8 billion in FY 2019, taking into account operating, capital, new technology, and low volume hospital payments as modeled for this final rule. Approximately \$4.4 billion of this estimated increase is due to the changes in operating payments, including \$1.5 billion in uncompensated care payments (discussed in sections I.G. and I.H. of this Appendix), approximately \$0.2 billion is due to the change in capital payments (discussed in section

I.I of this Appendix), approximately \$0.2 billion is due to the change in new technology add-on payments (discussed in section I.H of this Appendix), and approximately \$0.1 billion is due to the change in low-volume hospital payments (discussed in section I.H of this Appendix). Total differs from the sum of the components due to rounding.

Table I of section I.G. of this Appendix also demonstrates the estimated redistributive impacts of the IPPS budget neutrality requirements for the MS-DRG and wage index changes, and for the wage index reclassifications under the MGCRB.

We estimate that hospitals will experience a 2.3 percent increase in capital payments per case, as shown in Table III of section I.I. of this Appendix. We project that there will be a \$193 million increase in capital payments in FY 2019 compared to FY 2018.

The discussions presented in the previous pages, in combination with the remainder of this final rule, constitute a regulatory impact analysis.

## 2. LTCHs

Overall, LTCHs are projected to experience an increase in estimated payments per discharge in FY 2019. In the impact analysis, we are using the rates, factors, and policies presented in this final rule based on the best available claims and CCR data to estimate the change in payments under the LTCH PPS for FY 2019. Accordingly, based on the best available data for the 417 LTCHs in our database, we estimate that overall FY 2019 LTCH PPS payments will increase approximately \$39 million relative to FY 2018 as a result of the payment rates and factors presented in this final rule.

## R. Regulatory Review Costs

If regulations impose administrative costs on private entities, such as the time needed to read and interpret a rule, we should estimate the cost associated with regulatory review. In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20640), due to the uncertainty involved with accurately quantifying the number of entities that would review the proposed rule, we assumed that the total number of timely pieces of correspondence on last year's proposed rule would be the number of reviewers of the proposed rule. We acknowledged that this assumption may understate or overstate the costs of reviewing the rule. It is possible that not all commenters reviewed last year's rule in detail, and it is also possible that some reviewers chose not to comment on the proposed rule. For those reasons, and consistent with our approach in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38585), we believe that the number of past commenters would be a fair estimate of the number of reviewers of the proposed rule. We welcomed any public comments on the approach in estimating the number of entities that will review this final rule. We did not receive any public comments specific to our solicitation.

We also recognized that different types of entities are in many cases affected by mutually exclusive sections of the proposed rule. Therefore, for the purposes of our estimate, and consistent with our approach in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38585), we assumed that each reviewer read approximately 50 percent of the proposed rule. We welcomed public comments on this assumption. We did not receive any public comments specific to our solicitation.

We have used the number of timely pieces of correspondence on the FY 2019 proposed rule as our estimate for the number of reviewers of this final rule. We continue

to acknowledge the uncertainty involved with using this number, but we believe it is a fair estimate due to the variety of entities affected and the likelihood that some of them choose to rely (in full or in part) on press releases, newsletters, fact sheets, or other sources rather than the comprehensive review of preamble and regulatory text. Using the wage information from the BLS for medical and health service managers (Code 11-9111), we estimate that the cost of reviewing the proposed rule is \$105.16 per hour, including overhead and fringe benefits ([https://www.bls.gov/oes/current/oes\\_nat.htm](https://www.bls.gov/oes/current/oes_nat.htm)). Assuming an average reading speed, we estimate that it would take approximately 19 hours for the staff to review half of this final rule. For each IPPS hospital or LTCH that reviews this final rule, the estimated cost is \$1,998 (19 hours x \$105.16). Therefore, we estimate that the total cost of reviewing this final rule is \$8,809,182 (\$1,998 x 4,409 reviewers).

## **II. Accounting Statements and Tables**

### **A. Acute Care Hospitals**

As required by OMB Circular A-4 (available at [https://obamawhitehouse.archives.gov/omb/circulars\\_a-004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a-004_a-4/) and <https://georgewbush-whitehouse.archives.gov/omb/circulars/a004/a-4.html>), in the following Table VII., we have prepared an accounting statement showing the classification of the expenditures associated with the provisions of this final rule as they relate to acute care hospitals. This table provides our best estimate of the change in Medicare payments to providers as a result of the proposed changes to the IPPS presented in this final rule. All expenditures are classified as transfers to Medicare providers.

As shown below in Table VII., the net costs to the Federal Government associated with the policies in this final rule are estimated at \$4.8 billion.

**TABLE VII.—ACCOUNTING STATEMENT: CLASSIFICATION OF ESTIMATED EXPENDITURES UNDER THE IPSS FROM FY 2018 TO FY 2019**

<b>Category</b>	<b>Transfers</b>
Annualized Monetized Transfers	\$4.8 billion
From Whom to Whom	Federal Government to IPSS Medicare Providers

**B. LTCHs**

As discussed in section I.J. of this Appendix, the impact analysis of the payment rates and factors presented in this final rule under the LTCH PPS is projected to result in an increase in estimated aggregate LTCH PPS payments in FY 2019 relative to FY 2018 of approximately \$39 million based on the data for 417 LTCHs in our database that are subject to payment under the LTCH PPS. Therefore, as required by OMB Circular A-4 (available at [https://obamawhitehouse.archives.gov/omb/circulars\\_a004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/) and <https://georgewbush-whitehouse.archives.gov/omb/circulars/a004/a-4.html>), in Table VI., we have prepared an accounting statement showing the classification of the expenditures associated with the provisions of this final rule as they relate to the changes to the LTCH PPS. Table VI. provides our best estimate of the estimated change in Medicare payments under the LTCH PPS as a result of the payment rates and factors and other provisions presented in this final rule based on the data for the 417 LTCHs in our database. All expenditures are classified as transfers to Medicare providers (that is, LTCHs).

As shown in Table VIII. below, the net cost to the Federal Government associated with the policies for LTCHs in this final rule are estimated at \$39 million.

**TABLE VIII.—ACCOUNTING STATEMENT: CLASSIFICATION OF ESTIMATED EXPENDITURES FROM THE FY 2018 LTCH PPS TO THE FY 2019 LTCH PPS**

<b>Category</b>	<b>Transfers</b>
Annualized Monetized Transfers	\$39 million
From Whom to Whom	Federal Government to LTCH Medicare Providers

**III. Regulatory Flexibility Act (RFA) Analysis**

The RFA requires agencies to analyze options for regulatory relief of small entities. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and small government jurisdictions. We estimate that most hospitals and most other providers and suppliers are small entities as that term is used in the RFA. The great majority of hospitals and most other health care providers and suppliers are small entities, either by being nonprofit organizations or by meeting the SBA definition of a small business (having revenues of less than \$7.5 million to \$38.5 million in any 1 year). (For details on the latest standards for health care providers, we refer readers to page 36 of the Table of Small Business Size Standards for NAIC 622 found on the SBA website at: [http://www.sba.gov/sites/default/files/files/Size\\_Standards\\_Table.pdf](http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf).)

For purposes of the RFA, all hospitals and other providers and suppliers are considered to be small entities. Individuals and States are not included in the definition of a small entity. We believe that the provisions of this final rule relating to acute care hospitals will have a significant impact on small entities as explained in this Appendix. For example, because all hospitals are considered to be small entities for purposes of the RFA, the hospital impacts described in this final rule are impacts on small entities. For example, we refer readers to “Table I.—Impact Analysis of Changes to the IPPS for

Operating Costs for FY 2019.” Because we lack data on individual hospital receipts, we cannot determine the number of small proprietary LTCHs. Therefore, we are assuming that all LTCHs are considered small entities for the purpose of the analysis in section I.J. of this Appendix. MACs are not considered to be small entities because they do not meet the SBA definition of a small business. Because we acknowledge that many of the affected entities are small entities, the analysis discussed throughout the preamble of this final rule constitutes our regulatory flexibility analysis. This final rule contains a range of policies. It provides descriptions of the statutory provisions that are addressed, identifies the finalized policies, and presents rationales for our decisions and, where relevant, alternatives that were considered.

In the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20640), we solicited public comments on our estimates and analysis of the impact of our proposals on those small entities. Any public comments that we received and our responses are presented throughout this final rule.

#### **IV. Impact on Small Rural Hospitals**

Section 1102(b) of the Social Security Act requires us to prepare a regulatory impact analysis for any proposed or final rule that may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 of the RFA. With the exception of hospitals located in certain New England counties, for purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of an urban area and has fewer than 100 beds. Section 601(g) of the Social Security Amendments of 1983

(Pub. L. 98-21) designated hospitals in certain New England counties as belonging to the adjacent urban area. Thus, for purposes of the IPPS and the LTCH PPS, we continue to classify these hospitals as urban hospitals. (We refer readers to Table I in section I.G. of this Appendix for the quantitative effects of the policy changes under the IPPS for operating costs.)

#### **V. Unfunded Mandates Reform Act Analysis**

Section 202 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) also requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates require spending in any 1 year of \$100 million in 1995 dollars, updated annually for inflation. In 2019, that threshold level is approximately \$146 million. This final rule would not mandate any requirements for State, local, or tribal governments, nor would it affect private sector costs.

#### **VI. Executive Order 13175**

Executive Order 13175 directs agencies to consult with Tribal officials prior to the formal promulgation of regulations having tribal implications. This final rule contains provisions applicable to hospitals and facilities operated by the Indian Health Service or Tribes or Tribal organizations under the Indian Self-Determination and Education Assistance Act and, thus, has tribal implications. Therefore, in accordance with Executive Order 13175 and the CMS Tribal Consultation Policy (December 2015), CMS has consulted with Tribal officials on these Indian-specific provisions of the proposed rule prior to the formal promulgation of this rule.

**VII. Executive Order 12866**

In accordance with the provisions of Executive Order 12866, the Executive Office of Management and Budget reviewed this final rule.

## **Appendix B: Recommendation of Update Factors for Operating Cost Rates of Payment for Inpatient Hospital Services**

### **I. Background**

Section 1886(e)(4)(A) of the Act requires that the Secretary, taking into consideration the recommendations of MedPAC, recommend update factors for inpatient hospital services for each fiscal year that take into account the amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality. Under section 1886(e)(5) of the Act, we are required to publish update factors recommended by the Secretary in the proposed and final IPPS rules. Accordingly, this Appendix provides the recommendations for the update factors for the IPPS national standardized amount, the hospital-specific rate for SCHs, and the rate-of-increase limits for certain hospitals excluded from the IPPS, as well as LTCHs. In prior years, we made a recommendation in the IPPS proposed rule and final rule for the update factors for the payment rates for IRFs and IPFs. However, for FY 2019, consistent with our approach for FY 2018, we are including the Secretary's recommendation for the update factors for IRFs and IPFs in separate **Federal Register** documents at the time that we announce the annual updates for IRFs and IPFs. We also discuss our response to MedPAC's recommended update factors for inpatient hospital services.

## **II. Inpatient Hospital Update for FY 2019**

### A. FY 2019 Inpatient Hospital Update

As discussed in section IV.B. of the preamble to this final rule, for FY 2019, consistent with section 1886(b)(3)(B) of the Act, as amended by sections 3401(a) and 10319(a) of the Affordable Care Act, we are setting the applicable percentage increase by applying the following adjustments in the following sequence. Specifically, the applicable percentage increase under the IPPS is equal to the rate-of-increase in the hospital market basket for IPPS hospitals in all areas, subject to a reduction of one-quarter of the applicable percentage increase (prior to the application of other statutory adjustments; also referred to as the market basket update or rate-of-increase (with no adjustments)) for hospitals that fail to submit quality information under rules established by the Secretary in accordance with section 1886(b)(3)(B)(viii) of the Act and a reduction of three-quarters of the applicable percentage increase (prior to the application of other statutory adjustments; also referred to as the market basket update or rate-of-increase (with no adjustments)) for hospitals not considered to be meaningful electronic health record (EHR) users in accordance with section 1886(b)(3)(B)(ix) of the Act, and then subject to an adjustment based on changes in economy-wide productivity (the multifactor productivity (MFP) adjustment), and an additional reduction of 0.75 percentage point as required by section 1886(b)(3)(B)(xii) of the Act. Sections 1886(b)(3)(B)(xi) and (b)(3)(B)(xii) of the Act, as added by section 3401(a) of the Affordable Care Act, state that application of the MFP adjustment and the additional

FY 2019 adjustment of 0.75 percentage point may result in the applicable percentage increase being less than zero.

We note that, in compliance with section 404 of the MMA, in the FY 2018 IPPS/LTCH PPS final rule (82 FR 38587), we replaced the FY 2010-based IPPS operating and capital market baskets with the rebased and revised 2014-based IPPS operating and capital market baskets effective with FY 2018.

In the FY 2019 IPPS/LTCH PPS proposed rule, in accordance with section 1886(b)(3)(B) of the Act, we proposed to base the proposed FY 2019 market basket update used to determine the applicable percentage increase for the IPPS on IGI's fourth quarter 2017 forecast of the 2014-based IPPS market basket rate-of-increase with historical data through third quarter 2017, which was estimated to be 2.8 percent. Based on the most recent data available for this FY 2019 IPPS/LTCH PPS final rule, in accordance with section 1886(b)(3)(B) of the Act, we are establishing the FY 2019 market basket update used to determine the applicable percentage increase for the IPPS on IGI's second quarter 2018 forecast of the 2014-based IPPS market basket rate-of-increase with historical data through first quarter 2018, which is estimated to be 2.9 percent.

In accordance with section 1886(b)(3)(B) of the Act, as amended by section 3401(a) of the Affordable Care Act, in section IV.B. of the preamble of the FY 2019 IPPS/LTCH PPS proposed rule (83 FR 20382), we proposed an MFP adjustment of 0.8 percent for FY 2019 based on IGI's fourth quarter 2017 forecast. We also proposed that if more recent data subsequently became available, we would use such data, if

appropriate, to determine the FY 2019 market basket update and MFP adjustment for the final rule. Based on the most recent data available for this FY 2019 IPPS/LTCH PPS final rule, in accordance with section 1886(b)(3)(B) of the Act, as amended by section 3401(a) of the Affordable Care Act, in section IV.B. of the preamble of this final rule, we are establishing a MFP adjustment (the 10-year moving average percent change of MFP for the period ending FY 2019) of 0.8 percent.

In the FY 2019 IPPS/LTCH PPS proposed rule, based on IGI's fourth quarter 2017 forecast of the 2014-based IPPS market basket and the MFP adjustment, depending on whether a hospital submits quality data under the rules established in accordance with section 1886(b)(3)(B)(viii) of the Act (hereafter referred to as a hospital that submits quality data) and is a meaningful EHR user under section 1886(b)(3)(B)(ix) of the Act (hereafter referred to as a hospital that is a meaningful EHR user), we presented four possible applicable percentage increases that could be applied to the standardized amount.

In accordance with section 1886(b)(3)(B) of the Act, as amended by section 3401(a) of the Affordable Care Act, in section IV.B. of the preamble of this final rule, we are establishing the applicable percentages increases for the FY 2019 updates based on IGI's second quarter 2018 forecast of the 2014-based IPPS market basket and the MFP adjustment, depending on whether a hospital submits quality data under the rules established in accordance with section 1886(b)(3)(B)(viii) of the Act and is a meaningful EHR user under section 1886(b)(3)(B)(ix) of the Act, as shown in the table below.

<b>FY 2019</b>	<b>Hospital Submitted Quality Data and is a Meaningful EHR User</b>	<b>Hospital Submitted Quality Data and is NOT a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is a Meaningful EHR User</b>	<b>Hospital Did NOT Submit Quality Data and is NOT a Meaningful EHR User</b>
Market Basket Rate-of-Increase	2.9	2.9	2.9	2.9
Adjustment for Failure to Submit Quality Data under Section 1886(b)(3)(B)(viii) of the Act	0.0	0.0	-0.725	-0.725
Adjustment for Failure to be a Meaningful EHR User under Section 1886(b)(3)(B)(ix) of the Act	0.0	-2.175	0.0	-2.175
MFP Adjustment under Section 1886(b)(3)(B)(xi) of the Act	-0.8	-0.8	-0.8	-0.8
Statutory Adjustment under Section 1886(b)(3)(B)(xii) of the Act	-0.75	-0.75	-0.75	-0.75
<b>Applicable Percentage Increase Applied to Standardized Amount</b>	<b>1.35</b>	<b>-0.825</b>	<b>0.625</b>	<b>-1.55</b>

B. Update for SCHs and MDHs for FY 2019

Section 1886(b)(3)(B)(iv) of the Act provides that the FY 2019 applicable percentage increase in the hospital-specific rate for SCHs and MDHs equals the applicable percentage increase set forth in section 1886(b)(3)(B)(i) of the Act (that is, the same update factor as for all other hospitals subject to the IPPS). As discussed in section IV.G. of the preamble of this final rule, section 205 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) (Pub. L. 114-10) extended the MDH program

through FY 2017 (that is, for discharges occurring on or before September 30, 2017).

Section 50205 of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), enacted on February 9, 2018, extended the MDH program for discharges on or after October 1, 2017 through September 30, 2022.

As previously mentioned, the update to the hospital specific rate for SCHs and MDHs is subject to section 1886(b)(3)(B)(i) of the Act, as amended by sections 3401(a) and 10319(a) of the Affordable Care Act. Accordingly, depending on whether a hospital submits quality data and is a meaningful EHR user, we are establishing the same four possible applicable percentage increases in the table above for the hospital-specific rate applicable to SCHs and MDHs.

#### C. FY 2019 Puerto Rico Hospital Update

As discussed in the FY 2017 IPPS/LTCH PPS final rule (81 FR 56939), prior to January 1, 2016, Puerto Rico hospitals were paid based on 75 percent of the national standardized amount and 25 percent of the Puerto Rico-specific standardized amount. Section 601 of Pub. L. 114-113 amended section 1886(d)(9)(E) of the Act to specify that the payment calculation with respect to operating costs of inpatient hospital services of a subsection (d) Puerto Rico hospital for inpatient hospital discharges on or after January 1, 2016, shall use 100 percent of the national standardized amount. Because Puerto Rico hospitals are no longer paid with a Puerto Rico-specific standardized amount under the amendments to section 1886(d)(9)(E) of the Act, there is no longer a need for us to make an update to the Puerto Rico standardized amount. Hospitals in Puerto Rico are now paid 100 percent of the national standardized amount and, therefore, are subject

to the same update to the national standardized amount discussed under section IV.B.1. of the preamble of this final rule. Accordingly, for FY 2019, we are establishing an applicable percentage increase of 1.35 percent to the standardized amount for hospitals located in Puerto Rico.

D. Update for Hospitals Excluded from the IPPS for FY 2019

Section 1886(b)(3)(B)(ii) of the Act is used for purposes of determining the percentage increase in the rate-of-increase limits for children's hospitals, cancer hospitals, and hospitals located outside the 50 States, the District of Columbia, and Puerto Rico (that is, short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa). Section 1886(b)(3)(B)(ii) of the Act sets the percentage increase in the rate-of-increase limits equal to the market basket percentage increase. In accordance with § 403.752(a) of the regulations, RNHCIs are paid under the provisions of § 413.40, which also use section 1886(b)(3)(B)(ii) of the Act to update the percentage increase in the rate-of-increase limits.

Currently, children's hospitals, PPS-excluded cancer hospitals, RNHCIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa are among the remaining types of hospitals still paid under the reasonable cost methodology, subject to the rate-of-increase limits. In addition, in accordance with § 412.526(c)(3) of the regulations, extended neoplastic disease care hospitals (described in § 412.22(i) of the regulations) also are subject to the rate-of-increase limits. As discussed in section VI. of the preamble of this final rule, in the FY 2018 IPPS/LTCH PPS final rule, we finalized the use of the percentage increase

in the 2014-based IPPS operating market basket to update the target amounts for children's hospitals, PPS-excluded cancer hospitals, RNHCIs, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa for FY 2018 and subsequent fiscal years. In addition, as discussed in section IV.B. of the preamble of this final rule, the update to the target amount for extended neoplastic disease care hospitals for FY 2019 is the percentage increase in the 2014-based IPPS operating market basket. Accordingly, for FY 2019, the rate-of-increase percentage to be applied to the target amount for these children's hospitals, cancer hospitals, RNHCIs, neoplastic disease care hospitals, and short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa is the FY 2019 percentage increase in the 2014-based IPPS operating market basket. For this final rule, the current estimate of the IPPS operating market basket percentage increase for FY 2019 is 2.9 percent.

#### E. Update for LTCHs for FY 2019

Section 123 of Pub. L. 106-113, as amended by section 307(b) of Pub. L. 106-554 (and codified at section 1886(m)(1) of the Act), provides the statutory authority for updating payment rates under the LTCH PPS.

As discussed in section V.A. of the Addendum to this final rule, we are establishing an update to the LTCH PPS standard Federal payment rate of 1.35 percent for FY 2019, consistent with the amendments to section 1886(m)(3) of the Act provided by section 411 of MACRA. In accordance with the LTCHQR Program under section 1886(m)(5) of the Act, we are reducing the annual update to the LTCH PPS standard

Federal rate by 2.0 percentage points for failure of a LTCH to submit the required quality data. Accordingly, we are establishing an update factor of 1.0135 in determining the LTCH PPS standard Federal rate for FY 2019. For LTCHs that fail to submit quality data for FY 2019, we are establishing an annual update to the LTCH PPS standard Federal rate of -0.65 percent (that is, the annual update for FY 2019 of 1.35 percent less 2.0 percentage points for failure to submit the required quality data in accordance with section 1886(m)(5)(C) of the Act and our rules) by applying a update factor of 0.9935 in determining the LTCH PPS standard Federal rate for FY 2019. (We note that, as discussed in section VII.D. of the preamble of this final rule, the update to the LTCH PPS standard Federal payment rate of 1.35 percent for FY 2019 does not reflect any budget neutrality factors, such as the offset for the elimination of the LTCH PPS 25-percent threshold policy.)

### **III. Secretary's Recommendations**

MedPAC is recommending an inpatient hospital update in the amount specified in current law for FY 2019. MedPAC's rationale for this update recommendation is described in more detail below. As mentioned above, section 1886(e)(4)(A) of the Act requires that the Secretary, taking into consideration the recommendations of MedPAC, recommend update factors for inpatient hospital services for each fiscal year that take into account the amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality. Consistent with current law, depending on whether a hospital submits quality data and is a meaningful EHR user, we are recommending the four applicable percentage increases to the standardized amount listed

in the table under section II. of this Appendix B. We are recommending that the same applicable percentage increases apply to SCHs and MDHs.

In addition to making a recommendation for IPPS hospitals, in accordance with section 1886(e)(4)(A) of the Act, we are recommending update factors for certain other types of hospitals excluded from the IPPS. Consistent with our policies for these facilities, we are recommending an update to the target amounts for children's hospitals, cancer hospitals, RNHCIs, short-term acute care hospitals located in the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa and extended neoplastic disease care hospitals of 2.9 percent.

For FY 2019, consistent with policy set forth in section VII. of the preamble of this final rule, for LTCHs that submit quality data, we are recommending an update of 1.35 percent to the LTCH PPS standard Federal rate. For LTCHs that fail to submit quality data for FY 2019, we are recommending an annual update to the LTCH PPS standard Federal rate of -0.65 percent.

#### **IV. MedPAC Recommendation for Assessing Payment Adequacy and Updating Payments in Traditional Medicare**

In its March 2018 Report to Congress, MedPAC assessed the adequacy of current payments and costs, and the relationship between payments and an appropriate cost base. MedPAC recommended an update to the hospital inpatient rates in the amount specified in current law. We refer readers to the March 2018 MedPAC report, which is available for download at [www.medpac.gov](http://www.medpac.gov), for a complete discussion on this recommendation.

Response: We agree with MedPAC, and consistent with current law, we are applying an applicable percentage increase for FY 2019 of 1.35 percent, provided the hospital submits quality data and is a meaningful EHR user, consistent with statutory requirements.

We note that, because the operating and capital prospective payment systems remain separate, we are continuing to use separate updates for operating and capital payments. The update to the capital rate is discussed in section III. of the Addendum to this final rule.

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